An Address
ON THE
RECENT EVOLUTION OF SURGERY.

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MR. PRESIDENT AND GENTLEMEN,—I am using no empty form of words when I say that our gathering this evening has lost much of its wonted pleasure from the absence from among us of one so long and so prominently identified with this society as Mr. Durham was. In a remarkable degree Mr. Durham was the very personification of the great characteristics of the Medical Society of London, for he combined intellectual keenness and ardour in his profession with intense warmth of heart and kindly feeling. Everyone knew him as the skilful surgeon and the very soul of honour; but we here knew him also as the wise administrator and the genial friend. When our President eleven years ago Mr. Durham gave us of his very best in time, in thought, and in effort, and made us ever his debtor; but he has placed the society under a still greater debt of obligation by his ten years of service as its treasurer. We owe it largely to his genius, which combined enterprise with caution, that we are now more handsomely accommodated and more financially prosperous than at any former time in our history. Many of us remember the striking and valuable oration which Mr. Durham gave fourteen years ago. His subject was the Surgery of the Future, and in his address he sketched out the lines along which the art he loved so well—and which he himself adorned—would progress in the immediate future. It is a striking testimony to his accurate appreciation of the new forces at work that he then foretold much of what has since been realised.

The subject that I have ventured to choose as my theme is the Recent Evolution of Surgery. I have selected it because, however unworthily I may deal with it, the subject, at any rate, is well worthy of attentive study. This has been true at every stage in the long history of our art, but never so true as to-day, and for those who, like myself, have had the opportunity of witnessing during the last twenty-five years such a development in surgery as has never occurred before in a generation—nay, not even in a century or a millennium. The origin of the surgical art is lost in the obscurity of prehistoric times, but for two thousand years at least we are able to trace more or less clearly and fully its onward march. Its progress has been slow and at times intermittent. The light of science has shone more brightly now here, now there, and great local schools have risen to fame, and then, alas, sunk into oblivion. Although the progress has been slow it has been assured, and at almost any time in the history of the art we can imagine an orator addressing his fellows and asserting with truth that the present was better than the past. This reflection may well give us confidence in the future, and temper our boasting of the present with the expectation of the greater things still to be realised.

It is possible to measure the progress of our art either by the growth in the ideas to which it gives expression or by the improved expression it gives to old ideas. Of method we find an almost infinite variety, and few surgeons are so devoid of all originality as not to add something to the constant advance of surgery as an applied art. The great principles and thoughts of surgery are few, and it is given only to nature's giants to develop or to correct them. By whichever standard we judge the progress of surgery within the last twenty-five years we shall be bound to admit that never before was the advance so general, so rapid, so beneficent. Inasmuch as mind is more than matter, and in the degree in which a truth is greater than any expression of it, the highest and truest standard by which we can estimate the progress of an art will always be the moral rather than the merely material. I believe the chief glory of this period lies in the almost entire transformation of surgical ideals that has occurred rather than in the improved methods of expressing them. In this sense it may with justice be called the "golden age of surgery," and to apply to it the poor term "progress," which we also use for the slow march onward of the last 2000 years, is altogether inadequate and therefore to some extent misleading. I have therefore ventured to use the word "evolution" to express this wonderful unfolding, enlarging, ennobling of the thought, spirit, aim, and ideal of surgery, in distinction to improvements in its methods only, which may well enough be connoted by the poorer word "progress." I propose, then, to show to what extent and in what direction the very life of surgery has undergone a striking evolution within the last twenty-five years. I shall ask you to test the position of surgery to-day, as compared with what it was when most of us first began its study, by its new estimate of the bearing of anatomical facts; by its higher regard for the integrity of the organism; and by its altered conception of its place and value as a healing art.

1. One great change that has come over surgery is the *removal of the formerly admitted anatomical restrictions upon surgical operations.* This is sometimes spoken of as the extension of surgery into new regions, and it is pointed out that organ after organ has been, as it were, captured by surgeons and shown to be a more or less fruitful field for their enterprise. That, I think, is but a very imperfect expression of the facts, and one that conceals their true significance. For what are the facts? We are all familiar with them. The operation of trephining probably dates from prehistoric times, and from that remote period up to a very recent day surgeons have confined their cranial operations to removal of more or less of the skull, and have most carefully abstained from interference with the brain within. Quite recently trephining has sunk in importance, and is now, as a rule, only an incident in an operation directed entirely to active treatment of the membranes and brain. Similarly, while our immediate predecessors operated timidly, if at all, upon the posterior part of the spinal column, we operate upon the spinal membranes and cord, and also occasionally upon the anterior part of the vertebral column. Of the surgery of the thorax the same holds true. Operations upon its walls were sanctioned long ago, and timid efforts were made occasionally to open and even drain the pleura, but the thoracic wall only was regarded as the legitimate field of surgical interference. Now, not only is the pleura a common field of successful surgical interference, but the lung itself is freely operated upon, and the chief bar to a much greater development of pulmonary surgery is the difficulty attending the minutely precise diagnosis and localisation of the diseases of this organ. The pericardium is aspirated or drained without hesitation, and the suggestion has been made not only to tap the heart itself, but to treat wounds of its muscular substance by careful suture in just the same way as similar injuries of other muscles. The mediastinum, too, has been brought within the pale of legitimate surgery. No single organ in the great cavity of the abdomen is now held to be beyond the reach of the surgeon's knife. The successful removal of huge abdominal tumours, which at first excited angry opposition and then admiring wonder, is now a commonplace event in every operating theatre in the world. This has been followed by the extension of surgical methods to one and another of the solid and hollow abdominal viscera, until now liver, spleen, kidney, stomach, and intestines, uterus and its appendages, gall-bladder and bile-ducts, ureters and urinary bladder, and even that most inaccessible of organs the pancreas—one and all have their own surgical history and triumphs. In other words, the field of direct surgical interference was formerly limited to the limbs and to the common coverings of the great cavities of the trunk, to the exclusion of the great serous membranes and the organs contained within them. Surgeons were content to recognise that many organs and parts of the body lay beyond the limits of legitimate surgical interference, and they admitted it to be no reproach to their art to refuse to interfere with the peritoneum, the kidney, the lung, or the brain. I submit that it is essential to a correct appreciation of the change that has occurred to notice that the advance has not been gradually or slowly made, but occurred practically simultaneously all along the line. Its explanation lies not nearly so much in increased momentum in surgical art as in a sudden removal of a restriction to its advance. Surgeons are not bolder now than in the past, and although their anatomical knowledge has in

many directions been made more precise, and they are possessed of operative aids unknown to a former generation, it is not chiefly in these influences that we must seek an explanation of the fact we are considering, but in the removal of a barrier raised and supported by ignorance and misconception. It arose partly from a belief that a surgical operation is in its very nature lethal, what we now call pathogenic, but largely from the view that certain tissues and organs of the body are of such anatomical delicacy, and so little endowed with either power of repair or ability to resist injurious influences, albeit that they are of prime importance in the animal economy, that to submit them to operation was to court certain disaster. He who saw the removal of a subcutaneous fatty tumour entail suppuration and the risk of blood poisoning could not contemplate with approval the removal of a kidney. When the surgical wound of a healthy joint was seen to be attended with the gravest risk to limb and even life, how could a surgeon dare to lay open and operate freely upon a huge serous sac like the peritoneum? When every surgical procedure entailed grievous risk and no means were known of certainly avoiding it, all surgeons felt the necessity of limiting operations to the irreducible minimum, and when it was forced upon them that the deeper their incisions the greater the peril, what else could they think than that the mere depth of an organ and the means taken by nature to protect it from external violence were a clear intimation of its being beyond the scope of surgery? Thirty years ago the body was mapped out into an operable area and an inoperable area, the distinction being based upon anatomical position and differences; but when surgeons understood the process of healing of uninfected wounds such an anatomical classification of parts became meaningless, and a great barrier to the progress of surgery was at one moment removed. To-day we know that simple, well-executed surgical procedures are not in themselves the cause of disease (pathogenic), and that every tissue and organ of the body is the seat of a power of repair more than equal to the demand surgery makes. With this knowledge the whole anatomical barrier to the progress of surgery has vanished, and the problem has assumed an entirely different aspect. From an anatomical standpoint the only bar to the feasibility of an operation is its mechanical impossibility. But I must guard myself from being understood to maintain that to-day a surgeon is free to incise anywhere or to excise anything. That can never be. The very removal of the anatomical restrictions upon the activity of surgeons has brought into relief the physiological restraints upon their art. Thus while the depth and important relations and the anatomical structure are no bar to the excision of either kidney, the physiological importance of the organs is an absolute bar to double nephrectomy or to the removal of a single kidney when its fellow is *hors de combat* from disease. A wandering spleen has been successfully excised, and such an operation is distinctly indicated where the organ gives rise to serious trouble from torsion of its pedicle; its place in the organism can be adequately filled by the bone-marrow, aided possibly by the lymphatic glands and sometimes by small masses of spleen tissues left behind in the gastro-splenic omentum. But, so far as we know, a wandering liver can never be treated in the same way; anatomically the operation is almost equally feasible, but physiologically it is barred. Similarly, cerebral surgery is at present limited to the relief of pressure upon its substance, the excision of morbid growths at or close to the surface, and the evacuation of abscesses in its substance. With our present knowledge we have to admit that the medulla oblongata and the central portions of the brain are outside the field of surgery, not because they cannot be reached or on account of any peculiarity of structure, but because of their physiological importance. The only limit in the anatomical range of his activities that a surgeon now recognises is the physiological one. He no longer asks himself whether this, that, or the other structure is too delicate to be the field of his interference, but only whether he can operate upon it without injury to structures necessary to life or without inflicting upon the patient greater disabilities than those caused by the disease or injury he seeks to combat. Thus the surgeon views the human body as a field for operations from an entirely different standpoint from that occupied less than a generation ago; we of to-day cannot put ourselves, even in imagination, quite into the mental attitude of those who immediately preceded us. In this new thought, then, we see one great sign of the evolution of surgery.

2. Closely connected with this change in surgical thought, and yet to some extent standing in contrast with it, is the *higher regard in which the physiological integrity of the organism is now held*. While no one tissue or organ is now held by surgeons to be beyond the scope of their activities, all tissues and organs have assumed an altogether new and higher sacredness in their eyes. To use a time-honoured but much abused phrase, surgery has become more entirely conservative in its aims than was ever the case before. It is true that diseased structures are removed with greater freedom than ever and almost regardless of their situation; but never before have we seen such efforts as are now made to limit operations to the removal of diseased parts and to save all healthy structure. I will mention four examples of the influence of this new spirit in surgery.

(*a*) My first example is found in the *diminished frequency with which amputation is resorted to* for injuries and diseases than at any former period. I will not attempt to prove this by statistics, for they are in great measure useless for the purpose. Indeed, I think it quite possible that if we appealed to statistics only we might meet such an awkward fact as this—that more thighs were amputated at a given hospital last year, let us say, than was the case twenty years ago. For while amputation for some affections has been replaced by happier methods of treatment, we must not forget that with greater safety attending all surgical operations there are other series of cases which were before deemed hopeless, even at the cost of an amputation, which are now so treated. Statistics may be good servants, but they are always bad masters. They are capable at the best of expressing only the grosser facts of human experience, and, as a rule, with much error bound up with their mathematical accuracy. The best of life cannot be measured and weighed, and were the statistical method the only one, or the chief, which showed the recent progress of the surgical art, the title of my address would be a misnomer, for of evolution mere numbers can tell us nothing. When a statistician has said his last word on a man's height, bulk, weight, age, and fortune, we are still in total ignorance of the man himself, his true personality and value. And so with surgery. The aims of surgery cannot be weighed and measured; the soul of surgery is as impalpable as the ether. Not for proof, then, but to gratify curiosity, and also that you may not think that these remarks are inspired by a suspicion that the so-called "facts" are against me, I have taken out the amputation statistics as given in the Surgical Registrar's Reports for Middlesex Hospital of the last two years, and compared them with those given in the similar reports for 1873 and 1874. I find that in this institution in the two years 1873 and 1874, 2382 patients passed under the surgeon's hands, upon whom 590 operations were performed, including 39 major amputations—by a major amputation I mean all amputations except those of the digits of either limb; twenty years later, 1893 and 1894, when the number of patients had risen to 2957 and the operations were 1554, the major amputations had fallen to 34. In other words, while 16 per 1000 of the patients treated by the surgeons in this institution twenty years ago suffered amputation, to-day the proportion so maimed has fallen to 11 per 1000. Twenty years ago 6·6 per cent. of the operations in this hospital were amputations; to-day only 2·1 per cent. are of this nature. These figures are small and not specially selected, and I do not quote them as anything more than a rough mathematical expression of a fact familiar to us all—that amputation has become much less frequent in surgical practice within the very recent period we are now considering. What a fact that is. A great and wholly undeserved glamour has been thrown around the operation of amputation. The interest attaching to its design and execution, and to the construction of a sound and useful stump, has done much to obscure the fact that amputation at best is a confession of failure, a refuge of the destitute. We have to admit that at times it is an inevitable step and may be a great boon to the patient, saving his life or health, or freeing him from the encumbrance of a painful and useless member; but all the same, it is a therapeutic tragedy, an irreparable disaster. Now, not so long ago surgeons took a special interest, even a pride, in their cases of amputation. To-day, I venture to say, there are no operations in surgery that excite less enthusiasm than amputations, none which are felt to be more opposed to the whole spirit of surgical art; and a surgeon rarely approaches one without not only a certain misgiving, but a painful sense of disappointment, if not of failure. The

readiness with which he resorts to amputation is recognised to be a rough working test of a surgeon's unfitness to practise his art. This is not only a great fact. It is the outward and visible expression of a great change which has passed over the whole mind and spirit of surgeons. There is more to interest an intelligent surgeon in the progress of a case of amputation to-day than there was twenty years ago; but to him this interest is dwarfed into littleness by the violation of one of his most cherished instincts in the sacrifice of healthy living parts in an effort to save or benefit the individual. What is true of amputation of limbs is equally true of the removal of organs, although in some cases the advance here has not been so great. But I can at least point to excision of the thyroid gland replaced by enucleation of tumours of that organ; and to the removal of tuberculous deposits from the testicle and even from the kidney in place of excision of these organs.

(*b*) My second example I find in the *higher standard of excellence we strive to attain in the repair of injuries and operation wounds.* Where twenty years ago we only aimed at our patient's recovery, and the final closure of a wound, we now look for perfect restoration both of structure and function. An incident that occurred in this room nearly twelve years ago is indelibly impressed upon my memory. The greatest of living surgeons had read a paper in which he described and advocated his then novel treatment of the direct suture of the fragments of a transverse fracture of the patella. Of the discussion that followed only one speech has lived in my recollection: it was that of a distinguished surgeon and leading teacher, nearly twenty years Sir Joseph Lister's junior, who told him, in his terse phraseology, that the operation was magnificent but it was not surgery. Not surgery! The idea of obtaining perfect structural repair of an injured part was so foreign to the thoughts of even our foremost surgeons that this successful effort to grapple with an injury that often permanently crippled its victims was condemned as unsurgical, the object aimed at was considered outside the pale of legitimate enterprise and comparable only with the heroic but mistaken Balaclava charge. The ideal then falteringly held up before us by Sir Joseph Lister, and which at first was entertained by so few, is now cherished by all and firmly possesses the mind of every true surgeon. All do not strive to attain it by the same road; that matters not; the idea of obtaining perfect repair of injuries has been grasped, and this has raised at a bound our standard of surgical excellence. See what it has led to. Other fractures than that of the patella are now submitted to direct suture if perfect repair cannot be obtained by our older—shall I say antiquated?—methods of treatment. Dislocations which could not be replaced by external manipulation used to be left; the surgeons had exhausted their resources when ropes and pulleys failed to drag back the errant bone, and they were content to leave the case to unaided nature. Now no one would consent to utter such a *non possumus*, but would at once replace the bone by operation. In obedience to the same impulse, the so-called "internal derangements of joints" are submitted to operation. This ideal finds another expression in the care now taken in the suture of wounds where many structures are divided. Where formerly surgeons spoke and thought merely of bringing the edges of a wound together, they now speak and think of the careful union of divided structures so as to obtain the most perfect repair. In the surgery of the abdominal wall the beneficial result of this serried suture of its different layers is very marked, and even such a detail as the splitting of the aponeurosis of the external oblique muscle in place of division of its fibres is not only attended to, but is found to be worth attending to. Another recent improvement of the same kind is the exact and serried suture of the divided tissues in cases of external urethrotomy, to secure perfect primary healing of the wound in place of the older and very disagreeable method of allowing the wound to slowly fill up. Surgeons have ceased to view with approval the slow healing up of their wounds by the laborious process of granulation, and this not only because that process is slow, but because it fails to restore the parts in the same perfect way that "primary union" does. I might adduce other evidence of this, but I hope it is needless to weary you with proof that our regard for the perfect repair of injuries and operation wounds is to-day altogether greater than it was twenty-five years ago, and that a new ideal of excellence possesses the minds of surgeons.

(*c*) My third example of the influence of this improved surgical spirit is seen in *the successful efforts now made for the radical cure of hernia.* Most of us remember the time when the general opinion of surgeons was that a well-fitting truss adequately met the indications of a case of hernia. The desire to obtain a radical cure was entertained by only a few, who were held to be Quixotic and unreasonable. To-day the men who regard a truss as the proper and satisfactory treatment for hernia are the marked men, and the aim of surgeons generally is to obtain by direct operation, if need be, but anyhow to obtain, a radical cure of the deformity. This illustration of my point is so striking that by itself it would have substantiated my claim that the aim and whole ideal of surgeons are now far higher than they were twenty years ago.

(*d*) My fourth example of the same spirit I find in the *application of surgery for the relief of many of the smaller ills and deformities* to which flesh is heir. Look, for example, at the operations now performed for the relief of the various forms of talipes. I do not refer, of course, to tenotomy, which was introduced long before the period of which alone I am speaking to-night, but to the operations of tarsectomy and the like. Look, again, at the excision of varicose veins, the direct treatment of thrombosis, the excision of small moles, warts, lipomata, suspicious growths, unsightly scars, and the like. While in some of these cases graver surgical principles are also at stake, such operations are mainly undertaken in obedience to a conviction, which we all now admit to be well founded, that surgery is rightly employed in remedying the slight as well as the graver defects of structure and function. These operations are the outcome of a new spirit among us, of what I have called the higher regard for the physiological and structural integrity of the organism. They are the expression of a new idea, and if the examples I have cited appear in any case to be trivial remember that an idea is always greater than any expression it ever receives.

3. The third idea that has found expression in the recent practice of surgery is *a new conception of the real nature of a surgical operation and of the personal responsibility of the operator.* As I have already incidentally mentioned, an operation used to be regarded as in itself a potent cause of disease, and along with this was that other great misconception, that suppuration was sometimes a physiological and not always a pathological process. Surgeons used to speak of "laudable pus," "healthy pus," "healing by suppuration," and so on. These phrases are gone—gone with the false ideas connected with them. We now draw a clear and sharp distinction between the physiological process of repair and the pathological processes of inflammation and blood poisoning. When surgeons saw nearly every wound suppurate, and erysipelas, septicæmia, pyæmia, gangrene, and secondary hæmorrhage were frequent complications, and when they found that neither the surgeon's skill nor the patient's sound health, nor the use of any known dressing for the wound or of none at all, was sufficient to guard against these appalling evils, what could they think but that an operation in itself was a cause of disease? Surgeons had only too great reason for knowing that, if by an operation they might rid their patient of one diseased condition, it was, as a rule, only at the expense of setting up another and possibly a far worse malady. Those who have entered upon the study of surgery only within the last fifteen or twenty years can form no adequate conception of the paralysing effect of these facts. The surgeon's confidence in his art was sapped at its very foundation, and, what was worse, his confidence in his own power of determining the issue of his cases was destroyed. As a result surgeons were with grim irony called "brilliant" if only they could execute with despatch and dexterity the feats of the operating theatre. If a large proportion of recoveries was obtained the man was apt to be called "lucky"; if failures predominated, again it was his "luck," shoulders were shrugged, the Deity was blamed, and the surgeon took comfort in his "brilliancy." To-day this is all as a dead language to us; the very slang of the hospital theatre is gone. Instead of brilliancy in execution only, we demand success; instead of speaking of "luck," we talk of surgical responsibility. Operations still fail, but instead of blaming the Deity we now blame ourselves for the result. For how do failures arise? (1) We may attempt what we are unable to effect, but such attempts should be made so as not to add to our patients' ills; we ought, at least, not to introduce any new elements of danger where we cannot effect relief. (2) An operation may be fatal from shock, its direct paralysing influence being more than the patient's powers can withstand. (3) Or, again, an operation may be fatal by the infliction of some injury to a really vital part, or by what is called

an accident, such as uncontrollable hæmorrhage. (4) Or an operation may be the means of infecting the patient's healthy tissues with virus introduced from without, or from within, from the patient's own tissues. So long as human nature continues what it is, with its tendency to error in observation and judgment surgeons will meet with these failures in their operations; but we cannot escape from the load of responsibility that our increased knowledge brings us, and we are bound to recognise that no one of us can any longer shield himself in cases of failure under the plea of ill-luck. As vain is it for a man to try to sever himself from his own shadow as for a surgeon to try to share in the increase of knowledge and escape from the heavier burden of responsibility it brings. And, look at the causes of failure of operations as we may, we cannot get rid of the conviction that these causes are under the control of the operator in a sense and to an extent that was never the case before. It takes but a few words to describe this great, this fundamental change that we have of late witnessed in the surgeon's estimate of the nature of his operations and of his share of responsibility in their success or failure; but no words of which I have command can adequately express the importance of the change thus indicated. The language of poetry alone is sufficient for that. Whether we regard the relief of human misery resulting from it, or the patient labours of those who have established our new position, or the marvellous world of hitherto unknown life which it has revealed, or the entire revolution of nearly all of our most firmly held pathological doctrines it has effected, the story of the germ theory of disease must long remain without any parallel in biological science.

4. Closely connected with this and arising from the same happy addition to our knowledge, *surgeons have apprehended that their highest ideal is to treat directly the causes of disease.* Up to the last few years surgical methods as applied to disease were crude in the extreme; they may be summarised as consisting of the removal of pathological products, as by amputation, the relief of tension, and the application of physiological rest. Knowing nothing of the ultimate causes of disease, nothing could be done to combat them. Of the many beneficent results of this change I cannot now speak; my aim is rather to fasten attention upon the change of thought itself than upon its practical outcome. I will take merely one example, and that shall be the case of tuberculous disease. For tuberculous disease of lymphatic glands the old practice never attained to anything better than the opening of abscesses, and in this it only slightly anticipated nature and in no way added to or supplemented her powers of dealing with the disease. To-day such a procedure is almost never adopted, except as a merely temporising expedient or a preliminary to a more radical operation. But, the existence of the disease being once established, the surgeon directs all his efforts to one single end—the removal, not only of the effete products of the disease, but of the active cause of the disease itself, the tubercle bacilli. As a result we have our patients well in a few days instead of their lingering on with slow suppuration for months and years, exposed all the time to a real peril of more widespread tuberculous infection. In tuberculous disease of bone we witness the same change in the treatment. It was a step in advance when excision of a tuberculous joint replaced the older plan of incision of abscesses, followed, if the case did badly, by amputation. It was a further step in advance when excision was practised at an early stage of the disease rather than late, because, the disease being more limited, the operator was the more likely to remove all the infective material. It was, however, a far more important step onward when excision was superseded by arthrectomy, the very essence of which is the early complete removal of all the diseased and infective tissue, with the preservation of all the healthy parts. From a pathological point of view, amputation and excision differ from one another only in degree; they are both of them empirical sacrifices of structures. Arthrectomy stands on a different plane altogether; it is the expression of a pathological conception—the removal of the cause of disease, and not merely its products—as well as of the physiological conception of the preservation of healthy parts. An equally striking change is seen in the treatment of chronic tuberculous abscesses—psoas abscess, and the like. The old method of incision and drainage, with more or less of empirical washing out of the abscess cavity, was a grim failure. It often led to rapid death from septicæmia or pyæmia, and when it did not the suppuration continued and the abscess was said to degenerate into a sinus. So bad were the results that many of the most experienced surgeons refused to operate at all and left the abscesses to burst, for they recognised that where they could not interfere with advantage it was their duty at least not to hasten their patient's end by an operation. It was, therefore, a great advance when Lister showed us how to open these abscesses without introducing a new element of danger by external infection of the abscess. But that, after all, only led us half the way along the path. We reached the goal only when we further learned where and what is the active cause of such abscesses and how that cause may be destroyed or removed. And so to-day we regard these cases, formerly so disastrous, as most hopeful, and yielding some of the best instances of the successful attainment of the new therapeutical ideal of surgeons—the removal of the cause of disease.

I will not weary you with further illustrations. Your own experiences will supply them in abundance. My point is that such a change in surgical treatment as this is not comparable with the replacement of one empirical method by another or of one mode of dealing with the results by another. The dealing with the actual causes of disease is a new fact in surgery, the expression of a new idea, and the conception has at one step lifted the art to a higher level, and has made it worthy of the name "scientific." Could I point to nothing else, this alone would justify my assertion that we have witnessed within the last twenty-five years such a development of the spirit of surgery, such an increased adaptation to the requirements of mankind, that "progress" is far too tame a word to apply to it; let us call it evolution.

Two collateral modes of expressing this new surgical thought are, I think, of interest to us. The first is the ardour and also the success with which the surgeon now applies himself to the arrest of morbid processes in their *early stages*. So long as the whole aim of the surgeon was to remove the results of disease, not to deal with its cause, he was content to wait, for mere convenience, until these products bulked large, until the case was "ripe" for treatment. But now that his object is to deal with the causes of disease he at once comes to realise that the earlier his interference the better. He is justified in this, not only by the saving it involves to the patient—a saving whether of time or of comfort, of health or of tissue—but also by its enabling him to deal more directly and more effectively with the causes of disease, because he is unfettered by the amount or the kind of the morbid results of their action. This thought has now such a firm hold upon the surgeon's mind that it has become a part of his instinct, and in any case of a failure the explanation which more readily springs to his lips than any other is that his interference was made too late. Indeed, in cases where we know nothing of the ultimate causes of the disease, as in cancer, the same principle inspires us to operate as early as the existence of the disease is recognised, and even before that, to remove "suspicious" nodules of disease, and so, if we can, to anticipate the origin of malignant growth. We do not know as an indisputable fact that the first small nodule of a malignant growth is, or contains, the cause of the disease, but we argue from analogy that it is, or does. We know quite certainly that the cause of cancer, whatever it is, does not lose its power over the individual by efflux of time; and influenced by this, but still more by our experience in cases where the cause of disease is known to us, we endeavour to combat the evil by the free removal of the disease at the earliest possible moment. My contention is that we have no absolute scientific warrant for so doing—we soon may have it; but yet the practice is universally commended and largely followed as a result of the fact that the highest ambition of surgeons now is to remove the cause of disease, to deal with it at its fountain-head or in the germ. But we see this same tendency exerting itself in another direction—in the stimulus it gives to efforts to anticipate the graver terminations of morbid conditions. The older surgeons would quote a proverb and decline to meet evil half way, and would wait until disaster had come before they endeavoured to combat it. Such an idea is wholly foreign to surgical feeling to-day; we remove an extra-uterine gestation as soon as it is clearly diagnosed, lest it should rupture and cause a fatal hæmorrhage. If we can help it we do not wait till our patients are moribund. We excise a diseased vermiform appendix lest it should cause a suppurative local peritonitis or a fatal general peritonitis. In thus dealing with diseased conditions, not because of what they are in themselves, but to anticipate more grave accidental sequels to them that may arise, we

give expression to a new surgical thought, and the practice therefore is to be placed on a different plane in our estimation from any mere improvement in surgical therapeutics along an old line.

5. The last indication of the recent evolution of surgery that I will mention is seen in the introduction of what I will call *physiological operations* into surgery. By a "physiological operation" I mean an operation performed on a part not itself the seat of disease or known to be the cause of existing disease, but by influencing which we can affect beneficially a gross morbid change in another part. It is a kind of substitutionary surgery. There are two very closely allied instances of this class of surgical operation—the removal of the healthy ovaries in the treatment of uterine fibroma and of the healthy testicles in cases of advanced prostatic fibroma. I am not now concerned with the results of these operations or with an exact appreciation of their true value; I only want to point out that operations of this kind stand in a category by themselves, that they are the expression of a new thought, and their introduction marks a new epoch in surgery. This appeal of surgeons to some of the highest and most recondite of the laws of physiology in the pursuit of their art is a striking evidence of the new spirit by which they are influenced.

I venture to hope that I have made good my point that within the memory of all surgeons of middle age their art has been enriched by the introduction of new ideas, new aims, and a new spirit, and to such an extent has the whole thought of surgery been revolutionised that to-day the art is entitled to a totally different position in our regard from that held by it even thirty years ago. Neither the time allotted to me nor a proper sense of the demand I have already made upon your indulgence will allow of my entering at all fully upon a consideration of the causes that have led to this happy result. The gain has come to us by no lucky accident; the new light has burst upon us by no sudden inspiration; but the truth has been unfolded as we have trodden the golden pathway of knowledge. To some extent the advance, even in thought, has been gained by improvement of method, as by the introduction of anæsthesia and of better modes of hæmostasis and of new mechanical appliances. But in the main it has been as we have increased in knowledge of anatomy, of physiology, and particularly of pathology, that the change in surgical thought and purpose has been effected. Good surgery is the outcome of a sound knowledge of these three sciences. As the strength of a chain is that of its weakest link, so the most minute knowledge of anatomy, combined even with a tolerably good appreciation of physiology, failed to evolve good surgery until a knowledge of the causes of disease supplied the lacking constituent. Anatomy aids in diagnosis and guides the surgeon as to what he is to remove and how best to do it, but its only therapeutic indication is *excise*. Physiology affords indispensable aid in diagnosis, points with unerring finger to the fell results of injury and disease, but bids the surgeon hold in high regard every part and power of the living organism, and calls on him in no uncertain voice to *save* and to *preserve*. Pathology, by telling him how disease arises, lives and thrives, brings harmony out of the discord by uttering its note: *arrest, prevent*. These words may mark for us the great stages through which our art has passed. Concerning itself at first with excisions, amputations, and such coarse modes, it rose to higher things by seeing that a nobler function was preservation, not destruction. From that of late it has advanced still further, as it has owned its chief ambition to lie in anticipating and preventing pain, disease, and death.

While in Nature evolution is seen to be the outcome of the silent working of unintelligent forces, and many refuse to accord any part to the influence of a presiding mind, in the evolution of an art all admit the predominant influence of mind and of individual genius. Were I to close this poor attempt to indicate the main course of the recent evolution of surgery and the chief forces that have led to it without any reference to that master mind to which we owe the greatest impulse that surgery has ever felt, I should be doing violence to my own feelings and to yours also. Although science knows nothing of nationality, and we here to-night rejoice in addition to our knowledge and to our powers of combating disease and death, whether it comes to us from a French Pasteur, from a Teuton Koch, from our Western cousins on the other side of the broad Atlantic, or from a son of that Eastern Empire now just rising above the horizon, we cannot help feeling a special pride in the fact that the name that shines with an unrivalled splendour on the page of surgical history is that of the Englishman, Joseph Lister. This society is rich in traditions; the picture which hangs on our walls is a precious treasure, not alone as a work of art and the work of a great artist, but as reminding us of the very personalities of the men that were its founders and the leaders in our profession a century ago. Anticipating the future, we may be sure that it will for ever remain one of the proudest traditions of this society, that it was here, to us, that Joseph Lister made more frequent and more important communications than to any other kindred society in London. This country has been the birthplace of many of the worthiest of men in every department of life, and in the profession of medicine, to which all civilised lands have contributed so richly, we take a foremost place. But Nature is not lavish of her choicest gifts; they often come to us at what we call long intervals, as if to enable us to judge of them with a true perspective. In the seventeenth century she gave us the immortal William Harvey to lay the foundation of our physiological knowledge; in the eighteenth century she gave us John Hunter, that great biologist and profound anatomist, the founder of scientific surgery; and in the nineteenth century she enriched the race with Joseph Lister, a man worthy to rank with Harvey and Hunter, not only for his genius, his powers of observation and reflection, his patience in research, and his scientific method, but even more for the magnitude and beneficence of the results that have followed from his efforts. It is a great thing to have and to hold in reverence our mighty dead; it is a better and a greater thing still to have and to honour our mighty living. Long may this ancient society flourish! Long may she retain in her fellowship this greatest of her sons! May she ever take a leading part in the working out of those great ideas which can alone ennoble our art! And may she never lack worthy followers of him who has taken the foremost place in the Recent Evolution of Surgery!

A Lecture

ON

THE RELATION BETWEEN THE MOVEMENTS OF THE EYES AND THE MOVEMENTS OF THE HEAD.[1]

Delivered before the Oxford University Junior Scientific Club at the University Museum, Oxford, on May 13th, 1895.

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WE all know that it was a long time before mankind found out that the earth moves. For ages the apparent motion of the heavenly bodies was supposed to be their real motion, the earth being fixed. We, who know something of the truth in this matter, do not, however, any more than our ancestors did, see or feel the earth move. We believe that it does so, either because we have been told by someone who, we think, knows about such things, or because we have reasoned the matter out from data observed by ourselves or reported by credible observers. But in habitual thought and speech we go back to the old assumption, which, for our practical, terrestrial purposes, answers well enough and is perfectly in accordance with our sensations. When we turn from the great cosmos to the microcosm, when we compare the motion of our own body among the various fixed (terrestrially fixed) and moving bodies around us with the motion of the earth among the stars we find quite a different state of matters. It never occurs to us that our own body is at rest and that the trees, houses, &c. move. When we really move we not only know but feel and see that we are moving, and everyone, learned or ignorant, old or young—if only he is sober—feels and sees that the solid earth is fixed, except on the rare occasion of an earthquake and in the case of some illusions which we shall have to consider. I wish to discuss the cause of this sensation of the fixedness of the earth, and

[1] Being the fourth "Robert Boyle" Lecture.

also incidentally of the exception implied in the words I have just used, "if only he is sober." If we keep our head fixed and look at any really fixed scene—say, a room in which there is nothing moving, or a landscape, if we can find one, without railway trains, ships, moving beasts, or flying birds—we can allow our eyes to run over it in as uniform or as irregular a way as we please, and see that the scene remains fixed. We might have supposed that as we move our eyes from right to left the whole scene, like a moving panorama, would seem to move from left to right, but it does not do so. It remains visibly at rest, and we know, without any reasoning about it, that the changes of view were produced by the motion of our eyes. We fancy that we can move our eyes uniformly, that by a continuous motion like that of a telescope we can move our eyes along the sky-line in the landscape or the cornice of the room, but we are wrong in this. However determinedly we try to do so, what actually happens is that our eyes move like the seconds hand of a watch—a jerk and a little pause, another jerk, and so on, only our eyes are not so regular—the jerks are sometimes of greater, sometimes of less, angular amount, and the pauses vary in duration, although, unless we make an effort, they are always short. During the jerks we practically do not see at all, so that we have before us, not a moving panorama, but a series of fixed pictures of the same fixed things, which succeed one another rapidly. It is not difficult to understand how this gives rise to a sensation of the fixedness of the external scene. If, in the otherwise fixed scene, there is a really moving object we see it move, because during the pauses, short as they are, the moving object has visibly changed its place, and in each of our fixed pictures the moving object is seen to move. If it moves too slowly for this, then we do not see it move, but only infer its motion from comparison of its position at different times. If we keep our eyes fixed on the moving object—and this is possible if it does not move too fast or too irregularly—then we see it fixed and the really fixed things moving, an illusion we have all observed when the pier seems to move and the steamer remain at rest. That the eyes jerk in the way now stated can be made plain by means of a simple experiment. If we have in the field of view a bright object, such as an incandescent electric lamp, and, after running our eyes over the scene before us shut our eyes, we see secondary images of the bright object.[1] Now if the eyes move continuously from one position to another, we should see between the two secondary images of the bright object corresponding to these two positions a bright band composed of an infinite number of images each infinitely near its two neighbours. But we see no such band, but a finite number of sharp individual images, each of which corresponds to the position of the eyes during a pause between jerks; unless the bright object is very bright there is nothing in the secondary image to represent the positions of the eyes during the jerk. If for a bright object we take the sun, then we do see bands joining the sharp secondary images. These bands are fainter than the sharp images and die away sooner. They are the impressions made on the retina by the image of the sun passing rapidly across it during the jerk; but if with the fixed bright object in the field we follow with our eyes a really moving thing, then on shutting the eyes we see a band of light, because the image of the bright object passed not very rapidly across the retina. This habit of jerking the eyes from one position of vision to another as fast as the light, well-poised globes can be swung round by the quick-working, straight-fibred muscles which move them may be an innate habit or it may have been acquired by our looking at things and turning quickly from one object of interest to another; at all events, it is now the way in which alone we can move them unless we fix them on a moving object.

So far I have supposed the head fixed and the eyes alone moving. Let us now attend to what happens when we move our heads.[2] The movement of the head, unless it is very rapid, makes no difference at all in the phenomena just described. If we call the line along which we look during the pause between two jerks a glance-line, we may describe the whole phenomenon by saying that the glance-lines are fixed relatively to fixed external objects whether the head is rotated or not. This, of course, means that during a pause the eyes are rotated relatively to the head about the axis on which the head is really rotated, in the opposite sense and through the same angle as the head. It might be supposed, for all that has yet been said, that this fixedness of the glance-lines when the head is rotated depends on the habit of looking at things, but that this is not the cause, or, at all events, not the only cause, is plain from the fact that the same relative movements of the eyes take place when we look at an objectless field of view, such as the clear, cloudless sky, or, as was, I believe, first noticed by Dr. Breuer, when the eyes are shut. By placing the fingers lightly over the closed eyelids we can feel the motion of the prominent corneæ. If, with eyes shut and fingers so placed on the eyelids, we turn the head or turn the head and body round, we feel the eyes twitch. As the head turns round, the eyes retain for a little a fixed orientation in respect to external fixed things and then jerk so as to make up for lost time, again pause, and again jerk, and so on; so that, while the head turns uniformly, the eyes, which must of course, on the whole, make one full turn while the head makes one full turn, do their rotation intermittently, being, so to speak, left behind by the head and then making up by a rapid jerk. Another proof that these compensatory movements, as they may be called, of the eyeballs are not, or at least not wholly, caused by the effort of looking at things, is afforded by observing what happens when the head is rotated about a fore and aft axis, about an axis coinciding with a glance-line. If we keep our eyes fixed on a particular point and rotate the head about the line along which we look,[4] we still see things fixed, the world does not seem to revolve about our fore and aft axis. Here, also, we can show by means of secondary images that we see a series of fixed pictures. If, with a bright object in the field of vision, we fix our eyes and keep them fixed on a point about 15° distant from the bright object (if we keep both eyes open, about as far from our eyes as the bright object is, so as to avoid double vision), and then rotate the head about a fore and aft axis through, say, 30° by inclining the head towards one shoulder, and shut the eyes after this performance, we see a number of sharp secondary images of the bright object arranged upon an arc of a circle the radius of which is the angular distance of the bright object from the point fixed. If I have rotated my head through about 30° I see about five secondary images, so that what I call the angle of rotatory nystagmus is, in my case, about 6°. Here we have been looking all the time at the same point, and it is not easy to suppose that the very slight attention we pay to objects seen indirectly, or, as we sometimes say, "with the tail of the eye," could lead to a habit, so fixed that we cannot escape it, of moving the eyeballs in the way described.

I have said that the movement of the head, unless it is very rapid, does not affect the fixedness of the glance-lines. Translatory motion of our body may be so rapid, as in a railway train, that the eyes cannot twitch so fast as to keep the glance-lines fixed relatively to near fixed objects. The eyes do their best; they twitch, but not enough, unless the train is moving slowly, and near objects seem to fly backwards. We succeed with fixed objects at a greater distance from us; we can see them fixed, and all objects between us and such visibly fixed objects are seen to move backwards, and fixed things beyond them seem to move forwards with us. Of course, if by keeping our attention on our carriage and its contents our glance-lines become fixed in reference to these really moving things they seem fixed, and the whole world outside of the carriage is seen to move in the direction opposite to that of our real motion. It is also obvious that rotation of the head, if it is more rapid than the quickest possible rotation of the eyeball in the head, must affect the position of a glance-line, for, in order that the glance-line may remain fixed, the eyeball must rotate in reference to the head as fast in one sense as the head rotates in reference to external things in the other sense; but in the case supposed the eyeball cannot do so. We can try this experiment without having recourse to mechanical means of rotating our body and head, which of course we can do as fast as we please, and a great deal faster than is either pleasant or safe. The most rapid rotation of our head which we are able to produce by the direct action of our muscles is what is known as "wagging"—that is, a rotation about a vertical axis upon the joint between the first two vertebræ. In this way it is possible to give the head an

[1] The secondary images are better seen if we look at a white surface and wink rapidly.

[2] By "moving the head" I mean moving the head either alone or along with the body or any part of it.

[4] If we take a sufficiently distant object as the thing to be looked at we may neglect the want of coincidence of the two glance-lines belonging to the two eyes, and, moreover, all that is here described is seen as well, though not so conveniently, with one eye shut.

angular velocity considerably greater than the maximum angular velocity of the eyeball. When we do this as fast as we can we see that external things do not appear steady. When we wag our head to the right we see the world wag to the left, and *vice versâ*. But the external really fixed things do not appear to us to describe nearly so large an angle as the head really does; the eyes make an effort to compensate the rotation of the head—an effort only partially successful, the angle through which external things seem to move being the difference between the actual angular rate of movement of the head and the maximum possible angular rate of movement of the eyeball in its socket. This difference can best be observed—and, indeed, can be approximately measured—by observing a distant light on a dark night while we wag the head. The point of light seems drawn out into a horizontal line of light, the apparent length of which is the angular difference in question. As we can wag our head much faster than we can nod it, the apparent length of the vertical line of light into which a bright point is drawn out when we look at it and nod as rapidly as we can is much less than that of the horizontal line of light just spoken of; but I find that I can, by nodding, rotate my head about a right and left axis a little faster than I can rotate my eyes about the same axis, so that the luminous point does appear to be drawn out into a short vertical line. Such violent movements of the head occur sometimes in our ordinary (not experimental) use of our eyes, but they are rare and isolated, so that the disturbance of the fixedness of the glance-lines which they cause does not really affect our sense of the fixedness of the world. The illusion of the moving pier and fixed steamer (which we have all also observed when there is a train alongside that in which we happen to be, and we see the moving train fixed and the fixed train moving) is corrected by looking at the shore or the railway station. For a moment these also seem to move, but our glance-lines almost instantly become fixed in reference to those things which we know are fixed, and it is then difficult to recall the illusion. Another similar case is that of the moon and the clouds. We sometimes see the moon moving and the clouds fixed, sometimes the clouds moving and the moon fixed, as our glance-lines are fixed relatively to the clouds or to the moon, and a little practice enables us to change from the one sensation to the other at will.

What has been said seems to show that our immediate sense that the earth and what we call fixed objects on it are fixed is a consequence of the way in which we move our eyes, and, in particular, of the way in which, by a suitable movement of the eyeballs, we involuntarily and unconsciously compensate movements of the head, voluntary or involuntary, conscious or unconscious.[5] That such an immediate sense of the fixedness of external fixed things is of great use to us in moving about among them is plainly shown when we observe the trouble which a drunken man, who has lost this sense, has in guiding himself.

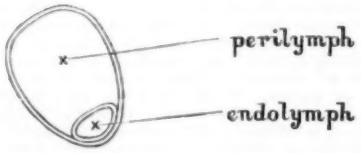
I now turn to the question, What is the cause of this prompt and wonderfully accurate compensatory movement of the eyeballs? There are three sources from which we can obtain information leading to an answer—viz., (1) from experiments on ourselves, (2) from anatomical observations and measurements, and (3) from observations of the effects of injuries to the labyrinth of the internal ear. I shall consider these in their order.

By experiments on ourselves I mean the study of the effect on the motion of the eyes and on our sense of the fixedness of external things, of movements of our head (in this case always along with the rest of our body), which we do not make, as a rule, for any other purpose. I have already stated that if we shut our eyes, place our fingers on the eyelids, and turn round about a vertical axis, we feel with our fingers the jerking motion of the eyeballs. If, instead of turning round once, we turn round several times—still better, if we seat ourselves on a turning-table and get someone else to turn it and us round at a uniform rate,—we find that the jerks become less and less frequent, and after two or three turns cease altogether. Another thing which we observe is that, although the turn-table is being turned round at a perfectly uniform rate, we feel the rotation becoming slower and slower, and when the jerks of the eyeballs have quite ceased we feel ourselves at rest and have no sensation of rotation. Let us for convenience call the sense in which the rotation is still going on positive. This uniform positive rotation has become to us imperceptible (as long as we keep our head in the same position in respect to the vertical) and is what we may call a "new zero of rotation." If the rate of rotation is now increased we feel this increase as a positive rotation; if it is diminished we feel the diminution as a negative rotation—a rotation the other way about. What we really perceive then is *acceleration* of rotation, using the word "acceleration" in its technical sense. If the turn-table is stopped this is a negative acceleration, and what we feel is that we are being turned round in the negative sense, and at the same time we feel our eyeballs jerk. The sense of rotation and the jerking die away in this as in the former case. If, while we are being turned round with uniform angular velocity, but after all sense of rotation and all jerking of the eyeballs have ceased, we open our eyes, we still feel ourselves quite at rest, but we see all external objects turning round us; as has been well said by Professor Mach, the external world seems to turn round inside an outer, unseen, fixed world. It is in reference to this imaginary fixed world that our glance-lines are now fixed. If the rate of rotation is changed while the eyes are open the sensation of rotation is exactly the same as if they were shut; we feel the acceleration—positive or negative—as a rotation in the one or in the other sense, and the jerks of the eyeballs take place as if the real external world were not there and we were looking beyond it at the unseen fixed world outside of it—that imaginary world in reference to which our glance-lines are now fixed. If, while the experiment I have described is going on, we move so as to change the direction in our head of the axis of rotation—for instance, if after uniform rotation about a vertical axis has gone on, with the head in its usual upright position, until the sense of rotation has ceased, we bow our head forwards so that the axis of rotation is now parallel to a line from the occiput to the chin—a very striking and somewhat alarming, but most instructive, sensation is experienced. What we feel is that we are being turned round with a rotation which is the resultant of two rotations of equal angular velocity—one the real rotation about what is now the vertical, the other the imaginary (but equally perceived) rotation in the opposite sense, about the line in the head which was vertical. If the angular movement of the head is small, so that the angle between what is the vertical and what was the vertical is small, then the two component rotations nearly neutralise one another and the strange and alarming resultant is slight; but if the head is bent so that the old and new verticals are at right angles to one another the real and imaginary components are both felt in full, and the effect is very startling. If the rate of rotation is changed simultaneously with the change of position of the head we have a resultant of two rotations of different angular velocity. The most easily observed case of this kind is when the rotation is stopped altogether at the moment of change of position of the head. Here the real component is zero and we have only the imaginary one. This is the case of the well-known practical joke. A man is asked to plant the poker before him on the floor, place his forehead on the end of it, walk round it three times, and then rise and walk to the door. The preliminary part of this experiment presents no difficulty; the victim plants the poker, puts his forehead on it, and walks round it with the greatest ease and with no sense of anything unusual; but when he rises the line in his head which was vertical is now horizontal, and he feels himself turned round about that horizontal line. The external world he also sees turning round this line, objects on the one side rising up and objects on the other side sinking down. In this visibly swaying world he has to guide his sensibly rotating body, and if his friends do not catch hold of him he is pretty sure to fall. All these experiments are most conveniently made on a smoothly working turn-table of such a size that one can comfortably lie down upon it. By the kindness of Messrs. Dove, lighthouse engineers, I had the use of a large turn-table made for the revolving lantern of a lighthouse. It could be turned round smoothly and uniformly at the moderate speed that is most suitable for experiments of the kind in question. A few experiments with such an apparatus will convince anyone that we have here to do with a perfectly definite sense and not with any vague sensations caused by the inertia of the soft parts of the body. This is one of the ways in which the phenomena have been explained by those who hesitate to believe that there can be a definite special sense only discovered within the last few

[5] I need hardly repeat that by movements of the head I mean movements of the head whether accompanied or not by movements of the body.

years. That the origin of the sensation is not in the soft parts of the body generally, but in the head, is made perfectly plain by the fact that the position of the head and the changes of that position alone determine the sensations. We must therefore look in the head for the organ of this sense.

In close proximity to the cochlea, which is universally regarded as the organ of hearing, there is an organ of very striking and, I might say, mysterious form. It is found in all vertebrates, and occurs in them fully developed except in the lowest forms of fish. It is contained in a bony—in cartilaginous fishes in a cartilaginous—cavity which communicates in birds and mammals with the cochlea or lagena. This cavity may be divided into the vestibule and the three semicircular canals. The canals open at both ends into the vestibule, and each has at one end an enlargement called the ampulla.[6] Within this bony case is contained a membranous structure consisting of the utricle, situated in the vestibule, and three membranous canals, each in one of the bony canals, each with an ampulla in the bony ampulla, and each opening at both ends into the utricle. The vestibule contains, besides the utricle, the saccule, a membranous bag continuous with the cochlear duct, and has in the side next the tympanic cavity a hole in the bony wall filled in by a membrane and known as the fenestra ovalis. The saccule and the utricle have each a spot on the lower wall supplied with nerves which end in air cells known as the macula acustica. The maculæ acusticæ are probably, as suggested by Professor Mach and Dr. Breuer, organs fitted to perceive acceleration of translatory motion, and are not connected directly with the function of the semicircular canals. The fenestra ovalis belongs to the organ of hearing, which may thus be said to have a right of way through the vestibule. We need not therefore here consider these organs any further, but confine ourselves to the semicircular canals and the utricle in its relation to them. As already stated, each bony canal contains a membranous canal. The membranous canal is, except at the ampulla, much smaller in bore than the bony canal, so that the space outside the membranous canal filled with perilymph is much greater than the space inside filled with endolymph. The membranous ampulla much more nearly fills the bony ampulla, so that here the perilymph space is comparatively small. The membranous canal is pretty firmly attached (in some animals, at all events) to the periosteum of the bony canal. (See diagram.) Each



canal is, in all animals I have examined, approximately in a plane, and it is important to consider the relations of these planes to one another and to the mesial plane of the head. As I have brought part of the apparatus with me, I may shortly describe the method I used to measure the angles which these planes make with one another, and also an improved method of which I have not yet had time to make any very full trial.[7] It consists in attaching the preparation—either a cast of the canals, or, in the case of a bird, the dissected and cleaned bony canals—to one arm of a branched rod, and a lump of wax to the other. The rod is then fixed to the large apparatus already referred to. The canals are successively made horizontal, and a small plate of glass is fixed horizontally in each case—parallel, therefore, to each canal—to the lump of wax. We can also attach a glass plate parallel to the mesial plane. We can thus have, on a comparatively small piece of wax, glass plates parallel to all the planes the relations of which to one another are to be measured. The lump of wax is then removed from the rod, and the angles between the planes of the glass plates are measured by means of an ordinary reflexion goniometer. The general results are: 1. The canals do not lie rigorously in planes, but sufficiently nearly so to give closely accordant results. 2. The external canals are very nearly at right angles to the mesial plane, and, therefore, from the bilateral symmetry the two external canals are very nearly in one plane. 3. The superior and posterior canals of the same side make approximately equal angles with the mesial plane. In all cases which I have examined the angle between the posterior canal and the mesial plane is somewhat larger than that between the superior canal and the mesial plane. From the bilateral symmetry, therefore, the superior canal of the one side is nearly, but not quite, parallel to the posterior canal of the other side. In the discussion of the way in which the system of canals may be supposed to act I shall for convenience assume that these canals are parallel, as the deviation from exact parallelism only complicates, but does not at all vitiate, the argument. 4. In man, and in a large number of other animals, the three canals are very nearly at right angles to one another; but in a good many of the animals I have looked at the superior and posterior canals make with one another an angle considerably greater than a right angle. Looking at the six canals as forming one system, we see that we have three axes and that at right angles to each axis there are two canals, one internal, the other external—these two canals having their ampullæ at opposite ends, so that if rotation takes place about the axis, the ampulla in the one case precedes the canal and in the other follows it. The vertical axis, as we may call that at right angles to the two external (or horizontal) canals, is pretty nearly vertical in most animals in the usual position of the head when the animal looks to the horizon; in man it is not exactly so—we must bow our head a little to make this axis vertical. If we suppose that we are looking north, the other two axes are N.E. and S.W. and N.W. and S.E. respectively. In man they pass from the eye of one side to the mastoid process of the other side, and are nearly at right angles to one another. As already stated, in some animals they are inclined and are nearer the right and left than the fore and aft line in the head.

In order to see how such a system can work as a hydrodynamical instrument let us first consider one canal. Here we have two watery liquids: the endolymph within the membranous canal, its ampulla and the utricle; and the perilymph between these and the bony case. How will these behave when rotation takes place about an axis normal to the plane of the canal? The inertia of the liquids will tend to produce a flow through the canal in the sense opposite to that of the rotation. Let the rotation take place so that the ampulla precedes the canal. Here the endolymph will tend to flow from the utricle into the ampulla, and thence through the canal to the utricle again. But, as Professor Mach has pointed out, the canal has too small a bore to allow of any sensible flow through it, so that the effect of this rotation will be to increase the pressure within the membranous ampulla. But—and this is a point to which, as far as I know, no one has hitherto called attention—as there will also be a tendency of the perilymph to circulate, so in its circle there is also a narrow place—namely, at the ampulla; for as the membranous ampulla nearly fills its bony case there is not much room there for the perilymph to pass from the vestibule into the space surrounding the membranous canal. There will, therefore, be a diminution of pressure of perilymph at the ampullary end of the canal, so that the ampullary walls will be stretched by the increase of pressure within and the diminution of pressure without. Of course, when the rotation is kept up uniformly for some time the pressure inside and outside of the membranous ampulla is soon equalised and the stretching or relaxation ceases. With the cessation of the stretching the sensation must also cease. If now the rotation is stopped, the perilymph and endolymph will tend to move on, and pressure will be produced inside the membranous ampulla of that canal which during the rotation moved with the ampulla following the canal. All this will, of course, be reversed when the rotation takes place with the ampulla following the canal; the pressure inside the membranous ampulla will be diminished, that without will be increased, and the walls will become flaccid. In each membranous ampulla there is a so-called "crista acustica" where nerves terminate in hair cells, and it is not difficult to suppose that stretching of the ampullary walls will irritate these nerve endings while a relaxation of the ampullary walls will produce no irritation. If this be so, then we have three axes, each with an organ sensitive to rotation about it in either sense and capable of discriminating between the two; and as every rotation of the head can

[6] In all animals the non-ampullary ends of the superior and the posterior canal have a common opening into the vestibule.

[7] The method illustrated by the human skull shown is fully described, with woodcuts from photographs, in Professor McKendrick's Textbook of Physiology, vol. ii., pp. 697-699, and therefore need not be reprinted here. The other method will, I hope, give more accurate measurements.

be resolved into component rotations about these three axes we have the means of perceiving the axis and what we may call the "intensity" of the rotation, or perhaps more correctly the "rotational acceleration."

This hydro-kinetic theory of the function of the semicircular canals was propounded at very nearly the same time by Professor Mach of Prague, Dr. Breuer of Vienna, and myself. I give the names in the order of publication. The views expressed by us were not exactly the same, and the statement of the theory I have just given is any one of them with additions and corrections from the other two. I have not thought it necessary to refer to the hydrostatic theory of Goltz, or, indeed, to give any details of the literature of the subject. A very full and accurate digest of almost everything that has been written on the functions of the several parts of the labyrinth of the ear has been published in Russian by Dr. Stanislaus von Stein and translated into German by Dr. C. von Krzywicki. The theory as I have just described it might perhaps have been developed, as I have here developed it, from a consideration of the structure and position of the canals; but, as a matter of fact, this was not the historical order. It was the experiments of M. Flourens that first directed attention to these organs as having something to do with the equilibrium of the body. In reference to these experiments and those made since by many able physiologists and skilled operators, I shall only say that the results seem to me to be consistent with the hydro-kinetic theory. Certain of M. de Cyon's experiments, in which he increased the pressure in the canals by inserting in them small tangle plugs without producing any nystagmus or rotatory movements of the head, appear to contradict the theory; but increase of pressure in the bony canal can have no tendency to stretch the walls of the membranous ampulla, and therefore could not be expected—if the theory as I have stated it is correct—to produce a sensation of rotation; what is required is that the pressure inside the membranous ampulla should be greater than that outside of it. The symptoms observed in cases of disease of that internal ear also appear to support this hydro-kinetic theory. But the position of the canals in close anatomical relation to the organ of hearing had impressed on the minds of physiologists so obstinate an opinion that they must be connected with the perception of sound in some way or other that even now many will not admit that they are the peripheral organs of a sense of rotation.

A favourite theory was (and there are still some who hold it) that the semicircular canals give us information as to the direction in which sound comes to us. There are two ways in which we can show that this view is erroneous: 1. By considering the physical conditions. The shortest sound wave which we can hear is so long compared with the dimension of the ear that every part of the ear must be at any instant in the same phase of the wave. We must assume that, as far as the effect of such sound waves is concerned, the liquid contents of the internal ear are incompressible. It is as absurd to speak of sound waves travelling round one of the canals as to say that it is high water at one end of a dock and low water at the other at the same time. 2. By experiments on the way in which we really do perceive the direction of sound. I shall describe two such experiments: (*a*) Let the observer close his eyes—for security it is best to bandage them,—seat himself in a chair, and keep his head steady. Now let an assistant produce a sharp, short sound. In showing this experiment to the Biological Section of the British Association at its meeting at Belfast in 1874 I used three coins in the way I show you now. The observer can tell with really astonishing accuracy whether the sound comes from the right or from the left, because he hears it louder in the nearer ear, but he is without any knowledge at all as to whether it comes from above or below, from the front or the back. He forms a judgment, indeed, on this point, but his judgment is usually wrong, often very ludicrously so. The experiment is most striking when the click is produced in the mesial plane of his head, in which case he has not the binaural effect to help him. In this connexion I may say that I know no experiment which illustrates so well the marvellous delicacy of our sense of relative loudness of sound, a very small deviation from the mesial plane being quite certainly recognised. We have, then, with one ear no means of ascertaining the direction of sound if we keep the head fixed. How, then, do we ascertain the direction of sound, for we all know that we can do so with very considerable accuracy? This leads me to the second experiment. (*b*) Let the observer, still with eyes closed and bandaged, stand up and be at liberty to move his head. Let the assistant produce the clicking sound—not once only, but again and again at short intervals, always in the same place. The observer turns round until he faces the source of the sound. He knows that he is facing it when he hears it equally loud in both ears, and hears it to the right when he turns a little to the left, and to the left when he turns a little to the right—that is the criterion of whether the source is behind or before him. Having now got the azimuth, he seeks the altitude. Moving his head about a right and left axis he seeks the position in which he hears the sound best. He is now looking towards the source of the sound.

The concha of the external ear acts as a screen, and it is remarkable how much difference there is in the quality as well as in the loudness of most sounds with different altitudes. Stand in front of a pipe from which water is rushing and move the head round a right and left axis—bow, in fact, to the pipe—and a striking difference in the quality and loudness of the sound will be observed in the different positions of the head. It may be said that birds have no concha, and yet they perceive as well as we do the direction of sound. But there is a method by which, without any use of the action of the concha and by purely binaural observations, we can ascertain the direction of sound. By one observation, as already described, we can find a plane containing the line along which the sound reaches us. That plane is at right angles to the line joining our two ears. By moving the head we can shift the line joining our two ears, and then by another similar observation obtain the plane at right angles to the new position of the line joining the two ears and containing the direction of sound. The direction of sound is the intersection of these two planes. I do not think we use this method (although I have tried it and found it work), but we often see birds when listening incline their heads in such a way as to suggest that they use it.

There is another objection which is often brought against the theory I have been explaining. It is said, "Is it conceivable that there should be a special sense, common to man and all vertebrate animals, which has remained unknown till about twenty-two years ago? This is a sense invented, not discovered, by scientific men, otherwise we should all have known about its existence at least." This objection is not one to be met by contempt, it has a real basis; and as I believe this sense to be a real one I feel bound to look for the cause of the incredulity. A special sense is popularly understood to be a gateway of knowledge. Information as to external things comes to us in various ways, and each of these ways has from ancient time been recognised and named as a special sense; but this is not exactly the physiological way of looking at things. I may illustrate the difference by a sort of analogy. In a large business establishment the manager sits in his room upstairs. He has various ways of getting information. The post brings him letters; he looks at them—some he carefully considers and answers, others he looks at and puts into the waste-paper basket, but he has looked at them all. So we *see* things. Many of the things we consider, take note of; others we pay no attention to, do not an hour later remember anything about them. But there are many messages which come to the business establishment and never reach the manager's room at all; they are attended to by clerks in the office. They are not futile, they are real messages and serve their purpose, a purpose essential to the carrying on of the business. If these were not attended to downstairs the manager would very soon hear of it. So with us. There are what we may call sensory impressions which do not make their way to the conscious *ego*, but are all the same properly attended to by what in us corresponds to the clerks. If our clerks neglect their work the conscious *ego* very soon becomes aware that there is something wrong. In the case of the sense of rotation ordinarily we pay no attention to its messages; the clerks at the sensory centres of the ampullary nerves and at the motor centres of the muscles of the eyeballs do all that is necessary. We perceive the result of their work in our visual sense of the fixedness of the outside world, and we do not trouble ourselves as to how the office work has been done; but—and here I come to a matter I referred to early in this lecture—the office work is sometimes not well done, and the visual sense of the fixedness of the outside world is lost. If this is due to disease, we send for a medical man and ask him to find out what is wrong in the office and, if he can, put it right. But there is a far more common cause of the loss of the visual sense of the

fixedness of the outside world—one which it has not been left for two or three scientific men to discover in the last quarter of the nineteenth century. The most characteristic effect of alcohol is to make all reflex actions sluggish. Under the influence of a moderate dose of alcohol, what I have called the "office work" goes on all right, but not quite so fast as with no alcohol. The message arrives and the answer is sent, but not quite so promptly. The conscious *ego* may not note anything wrong, but a quantity of alcohol (far short of a dangerously poisonous dose) may delay the transmission of the signal to the muscles of the eyeball so much as to affect quite perceptibly the compensation of the movements of the head. A perfectly sober man sees the world wag a little when he wags his head very vigorously—a point of light is perceptibly drawn out into a horizontal line of light; the office work fails a little under such extreme pressure. But a little alcohol makes the office work fail more readily, and as the dose is increased it fails altogether and the sense of the fixedness of the world is wholly lost. Even in such an extreme case of intoxication, short of paralysis, the drunken man may see the world steady if only he can keep himself steady. I daresay we have all seen very drunken men walking quite straight, but with a preternatural fixedness of the head. If anything makes them move their head they totter and reel. They move the head a little; that happens to them in consequence of a small and slow rotation of the head which happens to us when we wag our head violently, and they reel and stagger just as we should reel and stagger if we tried to walk, violently wagging our heads all the time.

Just as there are blind men and deaf men, so there are men who have lost, or never had, the sense of rotation. Such persons are almost always deaf-mutes. The close anatomical relation of the organ of hearing and the organ of the sense of rotation has this effect, that imperfect development or pathological injury of the one is usually associated with similar defect in the other; and experiments on deaf-mutes have shown that a large proportion of them are defective in the sense of rotation. This is shown by the absence of the normal jerking of the eyeballs when they are rotated and by a perceptible insecurity in their gait. They do not reel as drunken men do, just as blind men find their way about much better than we could do if our eyes were bandaged; they have learned to get on fairly well with the help of experience and their other senses.

I am not sure whether, in this account of the sense of rotation, of its organ, and of the use of it, I have carried all my hearers with me and convinced you of the real existence and real practical use of this sense. I hope, however, I have made it clear that the subject is worthy of attention and that we have here matter for the careful consideration of physicists, physiologists, and psychologists.

ADENOID GROWTHS IN CHILDREN.

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THE subject of adenoid growths in children is one which at the present time is exciting a great deal of attention. The subject has been often discussed, but always from the point of view of the throat specialist. It may, therefore, be not without interest to regard it from the standpoint of the general physician, and to consider the large number of derangements which may be set up by the presence in the naso-pharynx of these vegetations. The frequency with which adenoid growths are met with in children three and four years old and upwards is a matter of everyday observation, but it seems not to be so well known that they are equally common in infancy, and, indeed, that even at birth the mucous membrane in the post-nasal region may be thickened and granular from hypertrophy of adenoid tissue. At this early age the patient is rarely seen by a throat expert, and unless the child's pharynx be explored with the finger the growths will often be overlooked by the general physician, for it is perhaps exceptional for them to give rise to the ordinary symptoms of nasal obstruction. Often, even when present in quantity, there is no snoring, and the child may sleep with his lips closed, for, as Dr. Greville MacDonald has pointed out, during sleep the instinct of nasal breathing almost always asserts itself, and even if the mouth be open at this time the tongue is drawn backwards against the palate so as to shut off this channel to the passage of air. In an infant the growths should always be suspected if the child's nose be broad at the bridge and faintly dimpled on each side at the upper border of the inferior lateral cartilages, and especially if when the chest is uncovered any retraction be noticed in the inferior region of the thorax. In childhood symmetrical retraction of the infra-mammary regions and depression of the ensiform appendix owe their origin with few exceptions to naso-pharyngeal obstruction. In marked cases, where little air enters by the nose, the nares are small and the alæ flattened, probably from disuse of the organ as an air passage. In such children other symptoms may be met with: the hard palate is exceptionally high, the tonsils are overgrown, and examination of the auditory meatus shows a deep depression of the tympanic membrane; but the symptoms first enumerated—viz., the altered shape of the nose and the retraction of the inferior regions of the thorax—are by themselves amply sufficient for diagnosis; and if any uncertainty be felt a touch with the finger will put an end to it at once. In infants who suffer from this form of nasal obstruction one of the commonest consequences is snuffling in the nose with much mucous secretion. Non-syphilitic infants who snuffle are almost always the subjects of adenoid granulations. They seem never to be free from coryza, and often sneeze violently and discharge quantities of thick mucus from the nose. With this they may be hoarse, and from the persistence of these symptoms are often suspected wrongly of inheriting a venereal taint. I have fallen into this error myself, but am now convinced that persistent snuffling in infants is no sign of syphilis in the absence of other symptoms, and even that the addition of a large spleen is not sufficient warrant for such a conclusion. It will be noticed that the appearance of the nostrils is different from that seen in a syphilitic infant. No doubt the bridge of the nose is broad, but the nares are not cracked or dry or caked with crusts; the edges are moist, and without the little linear ulcers which are so common in the inherited disease. The obstruction, too, at this age is not nearly complete, and, unlike the tainted infant, the child takes the breast with comparative ease.

A symptom sometimes present in new-born infants is a loud crowing or croaking sound which accompanies the breathing. Various names have been given to this phenomenon. It has been called "infantile respiratory spasm," "congenital stridor," &c.; but as it is not proved that spasm has any part in the mechanism of the sound a name which suggests such agency should be avoided. This congenital crowing is usually limited to inspiration, and is sometimes very loud, especially during sleep. It varies considerably in intensity at different times, and may sometimes cease temporarily, to return after a short interval. In one case which came under my notice the mother complained that often while sitting in the dining-room she could hear the noisy breathing of the child in the nursery on an upper floor of the house. This symptom, according to my later experience, is seldom unaccompanied by post-nasal obstruction. Formerly such cases used to puzzle me greatly, for, knowing nothing of adenoid growths, I did not examine for them; but since reading Dr. W. Robertson's paper[1] I have always done so, and have never failed to detect either actual vegetations or a thickened, granular state of the post-nasal mucous membrane. It is indispensable that an exploration should be made with the finger. Laryngoscopical examination is always a difficult process in young infants, and mere inspection of the larynx and its immediate neighbourhood gives little information even if successfully carried out. On the other hand, it is an easy matter to pass the finger upwards behind the soft palate, and if this be done granulations, when present, can hardly escape detection. It is only in exceptional cases, when collapse occurs in the lungs, that the stridor is associated with real dyspnœa. As a rule, in spite of the apparent labour of breathing, the child seems in no way depressed. His face is placid and shows no lividity of the lips and eyelids such as would result from imperfect aeration of the blood; nor is there hoarseness of the cry or cough, as in cases of papillomata of the larynx. The condition, however, is slow to pass away; indeed, as time goes on the croak, instead of diminishing, often grows more and more pronounced. Dr. W. Robertson attributes the stridor to bilateral paralysis of the posterior crico-arytænoid muscles

[1] Journal of Laryngology and Rhinology, October, 1891.

which expand the rima glottidis. He believes that the irritation set up by the adenoid overgrowth in the post-nasal region is transmitted to the medulla and there excites and exhausts the accessory nucleus so as to induce depraved innervation in the muscles referred to. The growing intensity of the symptoms, he thinks, can be explained by a secondary contraction of the adductors, which are no longer opposed by the paralysed muscles. However this may be, treatment should be directed to the pharynx, and if the unhealthy condition be remedied by scraping, followed by astringent and antiseptic applications, the breath sounds soon recover their normal quiet. Uncomplicated cases of this congenital crowing generally recover. The fatal cases are those in which collapse of lung has occurred. This accident is one which must always be kept in mind, for in a new-born infant it is very readily induced, and if at all extensive is most dangerous to the life of the patient.

The contraction of the chest wall in the infra-mammary region, which has already been referred to, is most commonly met with, in a child who is not the subject of rickets, after the period of actual infancy has passed. It is a consequence of collapse in the anterior part of the inferior pulmonary lobes, and if this collapse be extensive the lower part of the sternum becomes prominent from retraction of the cartilages of the ribs. But in addition to this visible shrinking of pulmonary tissue it is common to find in infants and young children who suffer from these vegetations signs of collapse at the upper parts of the lungs. There may be deficient resonance with weak, harsh breathing at the supra-spinous fossa of one side, reaching, perhaps, a short distance below the scapular spine; and this may be accompanied by a dusky tint of the lips, but without other sign of imperfect aeration of the blood. At this period of life, too, a high-pitched percussion note at the supra-spinous fossa on either side, without notable alteration of the breath sounds, is commonly due to a patch of pulmonary collapse, and is very suggestive of adenoid growths, especially if the child at the time be not troubled with cough. Often when the naso-pharynx is obstructed by a mass of this hypertrophied tissue very hollow breathing conducted from the pharynx is heard over the upper part of the chest on either side. If this be conjoined with altered percussion note from collapse of lung the combination may suggest serious disease; indeed, the mistake is common and excusable. The usual explanation of this imperfect expansion is that owing to the impediment to the passage of air through the nose, and the child's instinctive return to nasal breathing during sleep, air reaches the lungs in too small a quantity to supply all the pulmonary cells, so that some of them remain undilated. This explanation seems to me to be an inadequate one, for contraction of the chest wall must mean permanent collapse of portions of lung at the seat of retraction. But in a child with healthy lungs and normal power of expansion an intermittent reduction in the air-supply can hardly induce permanent pulmonary collapse, for the moment the want of air makes itself felt the deficiency can be made good by breathing through the mouth. Indeed, this is what actually happens. During sleep nasal breathing is carried on until discomfort is felt from imperfect aeration of the blood. The child then half wakes up, takes several deep breaths through the mouth, and immediately sleeps again. By this means all through the night any collapsed cells are being continually re-dilated; and in the daytime when respiration is almost entirely buccal the lungs will, of course, work normally. Permanent collapse of lung, when not directly induced by the blocking of a tube with a plug of mucus—and this is not now in question—must owe its origin to some agency which acts more continuously than the one referred to. This agency, it is not unreasonable to think, is nervous influence. We know that stimuli conveyed through the superior laryngeal nerve promote expiration, and that inspiration is inhibited by stimuli passing upwards through this nerve and the glosso-pharyngeal. Irritation continually applied to the periphery of these nerves must greatly restrict the admission of air and prevent complete dilatation of the lungs. If by this means air enters the lungs in insufficient quantity, the parts least likely to be expanded are those which lie in contact with the ribs in places where the chest wall is flexible and can yield easily to the pressure of the air outside. In infants otherwise healthy who are troubled with adenoids the recession in the infra-mammary regions and the supra-clavicular spaces may be noticed at each inspiration, and as the patients get older a permanent retraction of these parts becomes established. But the evil effect of this incomplete expansion of lung is not limited to a change in the shape of the chest wall. Without a liberal supply of fresh air the lungs must perform their functions imperfectly; and any check to the free and active use of an organ tends to hinder its healthy development. If lungs work lazily they are apt to remain ill-developed and undersized, and small lungs are always vulnerable lungs. If, then, in such a case there be any tuberculous predisposition, the liability to the development of pulmonary phthisis is sensibly increased. The mere presence of the adenoid vegetations themselves, quite apart from their influence upon other organs, must increase this liability. A mass of lymphoid tissue of low vitality is greatly wanting in phagocytic power, and the weakened cells may not only fail to protect the system against the invasion of pathogenic micro-organisms, but, as Dr. Sims Woodhead has pointed out, may even serve as a means of carrying the bacilli from the surface to the interior of the body. The glands in connexion with the pharynx are often thus affected. In almost all cases of adenoid vegetations the cervical glands can be felt with unusual ease on each side of the neck, and it is not uncommon to find them enlarged and suppurating. In a great number—perhaps the majority—of cases of suppurating cervical glands, or of cases in which scars pointing to old abscesses are present in the neck, the cause of the secondary trouble has been adenoid growths in the naso-pharynx.

But of all the many consequences of post-nasal vegetations the influence they exert upon the nervous system is perhaps the most striking and important. There can be no question that in a neurotic child the worry set up by adenoid growths and the post-nasal catarrh they do so much to maintain is often great. One notable example of this nervous distress has already been referred to in the crowing breathing sometimes noticed in new-born infants; and, as has just been mentioned, insufficient expansion of lung may be ascribed with good reason to the same influence; but in neurotic children many other forms of nerve irritation may be traced to this source. Reflex spasm of the larynx is common with adenoid growths. Laryngismus stridulus I believe to be often dependent upon them, especially in those cases where the spasm occurs in children three or four years of age. In one such case, a child aged four years, the seizures, which had been frequent, ceased immediately the growths had been removed. In stridulous laryngitis, too, the nervous spasm is often, I think, due to this cause, and I have no doubt that the vegetations intensify the spasm of whooping-cough. Certainly children in whom the cough long retains its convulsive character, or returns after an interval of health, are almost invariably sufferers from adenoids.

The above are instances of local spasm, but the nervous distress may be distributed more widely. Attacks of general convulsions, such as come on sometimes in rickety children without apparent reason, I strongly suspect to be due to the presence of adenoids. But it is not only in young and rickety subjects that these cases are met with; growing children seven or eight years old and upwards may suffer in the same way. In these cases reflex agency may not be suspected on account of the comparatively advanced age of the patient, and the seizures may be looked upon as epileptic. But reflex convulsions are not limited to any particular age; they depend upon the sensitiveness of the nervous system, the readiness with which it responds to irritation, and the strength of the stimulus, so that convulsive seizures of a harmless nature may be seen in neurotic girls eleven or twelve years of age. In these cases the actual exciting cause is generally a post-nasal catarrh, for it is usually during a mild feverish attack, consequent upon exposure to chill, that the nervous symptoms have occurred. Other manifestations of nervous worry may also be met with. Attacks of asthma are sometimes put a stop to by removal of growths, and Dr. Greville MacDonald informs me that in at least one case he has known obstinate nocturnal incontinence of urine to cease quickly after the operation.

In children who suffer from these vegetations the hearing is often very sensibly impaired. In some cases, no doubt, this is the consequence of post-nasal catarrh and blocking of the Eustachian tube, but it is often the result of otitis, and Meyer has reported that out of 102 cases he found no less than seventy-two to be suffering from some trouble connected with the ear. It is partly on account of their deafness that so many of these children are

thought to be stupid, and there is no doubt that their faces often wear a vacant expression the silliness of which is not diminished by the mouth being held half open for purposes of respiration. But a really stupid child will often grow much more intelligent when the growths have been removed. These patients generally complain of headache, giddiness, and noises in the head. The tinnitus and perhaps the vertigo are probably dependent upon the ear mischief, but the headache, I think, is often a consequence of general weakness. It is an important fact that the majority of children who suffer from adenoids show very evident signs of defective nutrition. Sometimes they are ill-grown, and almost always their circulations are languid and their feet cold. Moreover, they are pale and thin or flabby, and although not, perhaps, physically indolent are easily tired. The common explanation of this unsatisfactory state is that, on account of the obstruction to the nose and the persistence of the patient in nasal breathing in spite of all difficulties, the lungs are ill-provided with air, so that the blood is insufficiently oxygenised and becomes loaded with carbonic acid and other impurities. But this explanation is far from conclusive. I have often been struck by the fact—of the truth of which I am convinced—that the degree of anæmia and malnutrition, and, indeed, the amount of general physical disturbance excited by the vegetations, is no just measure of the extent to which the nasal passages are obstructed; in other words, that the children whose naso-pharynx is most completely blocked are by no means those whose nutritive deficiencies and nervous symptoms are the most pronounced. I believe their weakened state to be a natural consequence of the curious tendency to take cold shown by all the subjects of adenoids. They are like hot-house plants in their extreme susceptibility to trifling changes of temperature. A slight draught of air; a little too-prolonged exposure during the morning's bath; leaving the house on a raw day with cold feet, even although carefully clothed—all these are means by which chill may be incurred; and the consequent catarrh not only increases the worry in the post-nasal region and pharynx, but also invariably affects the digestive organs. These children may be said to live in a state of gastric derangement. Their stomachs are habitually out of order, and however much they eat—and often the appetite is little impaired—their food seems to do them curiously little good. The natural consequences of this chronic dyspepsia follow: the child gets thinner and paler, and suffers not only from insufficient nourishment, but also from all the discomforts and evils arising from the passage along the bowels of undigested and fermenting food. There are few children with adenoid growths who do not give evidence of some of the ill consequences which have been described. A certain amount of collapse of lung, with consequent retraction of the chest wall, may be said to be always present, and in most cases the nutrition of the child is unsatisfactory. But it is the neurotic children who suffer the most. They may not, indeed, give evidence of direct nervous irritation and spasm, but they are almost always anæmic and thin, and habitual sufferers from gastric derangement. In such children early removal of the growths is, of course, indispensable to improvement, and if nervous symptoms be present an operation is all the more urgently called for. So, also, in children of phthisical tendencies surgical measures should not be delayed, on account of the influence of the vegetations in checking nutrition and hindering the proper working of the lungs. In other cases, if the general health seems to be quite unaffected an immediate operation is not needed; but wherever adenoids are known to exist the child should, if possible, be kept under observation, so that they may be removed at any time when they seem to be doing harm. The danger of deafness alone is one which it is of the utmost importance to guard against.

Queen Anne-street, W.

THE DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—The annual general meeting and congress of this society will take place at 20, Hanover-square, W., on Thursday, May 30th. The following arrangements have been made:—4 P.M., address by the President, Dr. Pye-Smith, F.R.S.; 4.30 P.M., annual general meeting, election of officers &c.; 5 P.M., paper by Dr. H. Radcliffe Crocker on the Internal Therapeutics of Psoriasis and some other Diseases of the Skin. An exhibition of living patients, drawings, microscopic specimens, &c. will take place afterwards.

THE DIAGNOSIS OF RETRO-PERITONEAL SARCOMA, WITH CASES.[1]

BY C. B. LOCKWOOD, F.R.C.S. ENG.,

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ANYONE who has performed many laparotomies must have met with retro-peritoneal tumours. I have twice found this embarrassing condition. In neither case was it diagnosed before the operation. Had a diagnosis been made there is no doubt but that a useless operation would have been avoided, and in one instance I should have been spared a fatality, which was a matter of much regret. I am, however, convinced that a diagnosis ought to be possible in this class of cases, and it is with special reference to this point that I propose to narrate my own experience. At the same time, others may be warned against a pitfall into which I fell and escape a similar disaster. The tumour to which I am about to refer—namely, retro-peritoneal sarcoma—is worthy of more attention than it has received. It is not mentioned in the various indices, or in the larger works upon abdominal and general surgery. So far as can be learnt no specimen of it has been shown at the Obstetrical or Pathological Societies. Hitherto the Medical Society of London has had no opportunity of discussing its peculiarities. By the expression "retro-peritoneal sarcoma" is implied a sarcomatous tumour growing behind the peritoneum and into its folds, and not connected with any of the great retro-peritoneal organs and unaccompanied with ascites. This definition excludes, therefore, sarcomata which grow from the kidney. They are retro-peritoneal, it is true, but owing to their origin they are always called sarcomata of the kidney. Similarly, one which grew from the adrenal body would be retro-peritoneal, but would be called a sarcoma of the adrenal body, and so forth. In the class of cases of which I am speaking such precision cannot be attained, because in both of the cases to which I am about to allude, and in others of the same kind, the origin of the growth was unknown. The narration of the first case will give an idea of some of the clinical and anatomical features of these retro-peritoneal growths.

CASE 1.—The patient was a robust, unmarried woman aged forty-seven years. She said she had been short of breath for nearly a year, and for three months had had a feeling of weight in the hypogastrium. Her abdomen was always big, but of late it had seemed unusually distended. Her left leg had recently become swollen. Beyond this there was nothing in her history to point to the nature of her disease. Examination showed that the abdomen was so tightly distended that the skin was shiny and the umbilicus almost obliterated. A hard tumour could be felt filling nearly the whole abdomen, but projecting most beneath the left linea semilunaris. It seemed to rise up out of the pelvis and to extend more into the left flank and upwards into the left hypochondrium than into the right side; but the rounded edge of the growth could be felt reaching beyond the umbilicus almost into the right hypochondrium and nearly into the right flank. It was said that the tumour was dull everywhere and that the area of dulness did not vary, but I doubt whether this observation was quite correct for reasons which will be given presently. There was no ascites, and no thrill could be felt or fluctuation, and nothing was heard with the stethoscope. My colleague, Dr. Remfry, said the tumour had no connexion with the uterus, and, although the signs were anomalous, thought that it might be a tumour of the left ovary. For myself, I thought that the tumour was solid and probably connected with the ovary. I opened the abdomen by the usual incision and came upon a tumour which looked and felt like a thick-walled cyst. The abdomen was so tight that the hand could not be properly introduced; but, so far as could be felt, a thick-walled cyst, with a good deal of solid growth, seemed to be in question. A trocar was thrust into the tumour, but nothing came out. I then incised what seemed to be the wall of a cyst, and scooped out a quantity of semi-solid contents. Soon some large vessels were met with, but were easily secured. By this time there was room to explore the abdomen properly, and then the left colon was found upon the surface of the tumour, lying almost beneath the left linea semilunaris. It

[1] A paper read before the Medical Society of London on May 13th, 1895.

is probable that its attachments were a good deal injured. The suspicions which this aroused were confirmed by the discovery that the mesentery and transverse mesocolon were incorporated with the upper part of the tumour, and that the pelvic organs were free. Moreover, at the sides of the abdomen the hand could not be passed behind any part of the growth. These points were made out with much difficulty, and the growth was clearly beyond the possibility of removal. The abdomen was therefore closed in such a way as to shut off the wound in the growth from the peritoneal cavity. A drainage-tube was inserted and an antiseptic dressing applied. For the first two days the patient seemed to be progressing well; but her temperature rose, sickness and other signs of obstruction set in, and she died upon the fourth day. An examination was made, which showed that the retro-peritoneal tissue was occupied by an enormous new growth. This reached from the brim of the pelvis to the diaphragm, and had thrust its way into the root of the mesentery, into the transverse mesocolon, and towards the hilum of the spleen. It enveloped but did not infiltrate the pancreas, kidneys, and supra-renal bodies. The vena cava inferior was incorporated with its posterior surface, and the mesenteric vessels ran through its substance. The mesenteric lymphatic glands were not seen, but might have been involved in the tumour. Towards the sides of the abdomen it had reached beneath the right and left colons. From this examination it was clear that the tumour was beyond removal. The organ or tissue whence it grew was, however, left obscure, but I thought it probably originated in the retro-peritoneal tissue. Both Dr. Galloway, who made the post-mortem examination, and myself were of opinion that this growth was a myxo-sarcoma. I regret that the report of the histological examination has been mislaid, but I have a distinct remembrance that no epithelial structures were found in the sections. The physical characters of the growth were those of a sarcoma. It was yellowish-grey in colour, with a red mottling in places. It varied from a soft solid to a gelatinous consistence. It was not very vascular except where it had involved the great vessels. It did not possess any capsule, but in places its lobes had pushed the tissues before them without infiltration having occurred. No enlarged lymphatic glands could be discovered. There was no peritonitis or suppuration, but the broken-down interior of the tumour had probably become infected. Before commenting upon this case I will narrate another of the same kind which was met with last year.

CASE 2.—The patient was fifty-three years of age and had noticed a fulness and weight in her abdomen for two years. She had been married for twenty-eight years, but nothing in her history pointed to the nature of the abdominal swelling. This was considerable, for her abdomen was forty-eight inches in circumference at the umbilicus. The swelling was caused by a tumour which occupied chiefly the right side of the abdomen. It was a firm and rounded mass, dull on percussion, devoid of bruit, and projecting most beneath the right linea semilunaris. Both flanks and the right side of the abdomen were resonant, and there was no ascites. There was a zone of resonance betwixt the tumour and the liver, and its upper margin could be felt about midway betwixt the umbilicus and the right costal cartilages. Below it seemed to dip into the pelvis. My colleague, Dr. Champneys, found no obvious connexion between the tumour and any pelvic organ. He was inclined to think that it belonged to the upper part of the abdomen. He agreed that an exploratory operation was desirable. On the whole I myself thought an unusual ovarian tumour was in question. I did not understand the significance of an observation which was made a fortnight after the patient's admission. The note said on Sept. 17th that "the lump in the abdomen seems most defined both towards the mid-line and down into the flank"; and four days later the note said: "There is decided resonance now in front of the lump, extending six inches to the right of the middle line and eight inches below the sternum." When I opened the abdomen a few days afterwards such a condition was found that it is only to be wondered that the area of resonance was not more variable and irregular. There was a large solid growth behind the peritoneum, growing into the root of the mesentery and pushing the small intestines in front of it. In this process the mesentery had been partially obliterated, so that in places the intestines were distributed over the surface of the tumour, lying in grooves in its substance. The growth had lifted up the peritoneum of the iliac fossa, together with the cæcum. The tumour was probably lobulated in places; it was of the colour of fat, but rather firmer to the touch. As the patient's condition was precarious nothing more was ascertained. The wound, which was extensive, was closed with buried silk sutures in the linea alba, and fishing gut sutures in the skin. The patient made a fair recovery, but her convalescence was retarded by an obstruction in the veins of the right leg. The iliac veins had probably been pressed upon by the tumour. I have lately endeavoured to communicate with this patient, but without success.

Remarks.—There can be no doubt whatever that had these cases been diagnosed an operation would not have been attempted. In the first the exploration forfeited the patient's life, and in the second it caused a grave and serious illness. When such a tumour as this cannot be removed at the operation the abdomen has to be closed in such a state of distension that the action of the heart and the respiration may be gravely embarrassed. In addition, every unnecessary and unsuccessful operation brings discredit upon surgery. Clearly it is of the greatest importance that we should learn to diagnose these retro-peritoneal sarcomata. In the early stages it is probable that this would not be a difficult task, especially if the abdomen was examined with the patient under the influence of an anæsthetic. The tumour would, I assume, be found to occupy some part of the centre of the abdomen near the root of the mesentery and to possess no obvious connexion with the kidneys or pelvic organs. But apparently the onset of retro-peritoneal sarcoma is so insidious that the patient is not seen during the early stages. In the cases above described the only symptoms at the beginning were breathlessness and a feeling of weight in the hypogastrium. The abdominal distension seems to have occurred so gradually that it attracted little notice. Therefore, we must reckon upon having to deal with these retro-peritoneal growths at a time when they have attained formidable dimensions and when the abdomen has become tightly distended. The difficulty of diagnosing abdominal swellings is notorious, but a solid growth which could not be attributed to any of the great organs ought, at least, to arouse suspicion. In both of the cases which I have narrated the uterus was at once excluded. The liver, too, was separated from the growth in each of them by a zone of resonance. The absence of urinary symptoms seemed to exclude the kidneys, although in one case the dulness extended into the loin. Nor could any reason be discovered for attributing the tumour to the spleen, pancreas, or supra-renal bodies. Its connexion with the ovaries was, however, in each case more difficult to decide upon and in each was strongly suspected. But not only did the tumour project into the true pelvis less than an ovarian tumour generally does, but its other characters were anomalous. Had I only suspected a retro-peritoneal growth in the first case the incision would have been prolonged and the nature of the growth revealed without putting the patient's life to an unwarrantable risk. Now, I cannot help thinking that we shall find the clue to the diagnosis of these retro-peritoneal growths in a correct appreciation of their anatomy. Let me recall what was found in the first case. In it the growth had spread behind the peritoneum and lifted up the intestines, so that the left colon ran down its front surface behind the left linea semilunaris. At the operation this part of the bowel was empty, but there must have been times when it was full of gas and capable of discovery by percussion. This information might not be obtained at one examination, but in a dubious case, such as this, no one would hesitate to defer an operation until several examinations had been made. In the second case this peculiar feature in the resonance of the tumour was actually observed, although its significance was not understood. The clinical notes said that after admission the tumour was dull on percussion; a fortnight later they said that there was a decided resonance in front of the lump, where none had been before. At the operation the appearance of this area of resonance in the front of the tumour was fully explained. The retro-peritoneal growth had extended into the mesentery, so that the small intestines were distributed over the surface of the tumour. Without question the variation in the areas of resonance was caused by one of these becoming distended. Doubtless retro-peritoneal sarcomata are rare, but others will be met with. It will be interesting to learn whether those who find them will be able to confirm my supposition that they will possess irregular areas of dulness and resonance, and, moreover, that their areas of resonance will vary from time to time.

Upper Berkeley-street, W.

TWO CASES OF INTESTINAL OBSTRUCTION.

BY P. RHYS GRIFFITHS, M.B., B.S. LOND.,
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THE truth of Jacobsen's statement that "the advances in operative surgery have outstripped those of diagnosis in intestinal obstruction" is perhaps as strikingly exemplified in the present day as it was five years ago. To the uninitiated this may savour somewhat of a reproach upon our professional progress. It is only when one is brought face to face with practical experiences that one realises fully the formidable obstacles in the way of accurate diagnosis. Of this I am quite convinced, that there is no task in medicine or surgery where the despair of utter impotence is more often felt than in unravelling the mysteries of a case of obstruction. Turning to operative measures we find ourselves beset on all sides with difficulties. It has been truly stated[1] that "abdominal section in the treatment of intestinal obstruction, both acute and chronic, is one of the most formidable operations in surgery." According to some of the latest statistics (Curtis) a mortality of 68·9 per cent. is given in published operations since 1873 in acute obstructions. For all operations the rate of mortality would, no doubt, be much higher. Without operation Greig Smith[2] says that "certainly 95 per cent. die"; "the indication is clear enough—as clear as the indication to tie a bleeding carotid—operation." Treves states: "With regard to the curative treatment [of acute obstruction] the only measure is laparotomy." Immediate operation is the teaching of the progressive school. On the other hand, we have the conservative school, with its small following, crying with equal vigour for delay in operation. Hutchinson, the leader of the conservative school, perhaps the keenest observer of the present day, maintains that "these forms of strangulation are *often* in early stages effectually relieved without operation; that, in fact, cases of recovery without operation after very acute symptoms are not uncommon." Hutchinson "fully recognises the propriety of exploratory laparotomy in cases in which the symptoms have persisted after one or more persevering attempts at taxis under anæsthetics." Upon one point there can be no question, I think—viz., that laparotomy is the indication in all cases after the stage of established peritonitis. Two or three attempts at taxis and manipulation carried out in a "*bonâ-fide* and energetic manner for half an hour or three-quarters" upon inflamed intestines seems to me both irrational and unscientific. Unfortunately the diagnosis of the stage of established peritonitis frequently presents insuperable difficulties. Not long since, in a case of ovariotomy under my care, death, before the post-mortem examination was made, was attributed to septic peritonitis of adynamic type. Not a trace, however, of peritonitis was discovered, the patient having died from cancer of the gall-bladder. Taxis and manipulation in the early stages of obstruction may in Hutchinson's hands often relieve strangulation, but we have no evidence that they produce better results than laparotomy in the same stage. In certain cases where the obstruction is due to the presence of a foreign body this method may be commended, but on the whole it seems to me to be a blind, unscientific method in which the patient is exposed to the veriest chance operations. By the method of laparotomy, on the other hand, we endeavour by an intelligent coöperation of brain and senses (1) to discover the lesion, and (2) to remedy it. When laparotomy fails it is generally due to one of the following causes: (1) delayed interference; (2) a pathological condition irremediable from the first; and (3) inability to discover the lesion, which, by the way, is by no means an uncommon occurrence. The two following cases will serve to illustrate some of the points to which I have referred. I am indebted to Dr. A. W. Sheen, our house surgeon, for help in the preparation of the notes and the general management of the cases.

CASE 1. *Acute obstruction.*—A man aged sixty-five years was admitted into the infirmary on Jan. 15th, 1895. He had been quite well till 4 A.M. on the 12th. He was suddenly attacked with pains in the bowels. The bowels were last open on the morning of the 12th, and during the morning he was sick. On Jan. 14th the vomited matter commenced to have a fæcal odour. He had had hiccough all night for the two nights before admission and had kept nothing on his stomach. A medical man had been seeing him and had given him pills, medicine, and rectal enemata. The injections were returned at once. The patient said that he had had a rupture on the right side since he was a child. This had not troubled him for years, but he had suffered vague pains in the bowels off and on for twelve months. The rupture was put back by his medical man on Jan. 12th. The patient was a thin, ill-nourished, old man, complaining of pain and tenderness at the top of the right inguinal canal. The finger met with no obstruction in the canal. The abdomen was somewhat distended. There was no dulness anywhere. There were no visible coils of intestine. The vomited matter was stercoraceous. The pulse was fine and the tongue moist; the pupils were contracted, and the patient was very dull, being fully under the influence of opium. This was evidently a case of strangulation after reduction, probably dependent upon one of two conditions: (1) damage to returned intestine, or (2) reduction *en bloc* or *en masse*. There was no second hernia, no marked distension, nothing in the ring, and no tangible swelling in the abdominal cavity; and, feeling certain that we had to deal with a damaged intestine, the patient was sent back into the ward. During the night the vomiting persisted, and as the patient seemed worse in the morning median laparotomy was performed. A loop of small intestine lying against the internal ring was pulled out. It was six inches long and of a purplish colour; the coats were thickened and it was evidently the portion of intestine which had been confined in the hernial sac. The intestinal contents could be pushed along it. The bowel was somewhat more distended above than below. It was returned into the abdominal cavity and the wound sewn up. In the after history of the case there is very little to note. The vomiting ceased after the operation, except on two occasions. Minute doses of morphia were given to control pain. The bowels acted naturally on Jan. 20th, five days after the operation. The motions were loose and frequent, and were passed into the bed. After Jan. 30th he had one motion per diem. He was taken home by his friends on Feb. 3rd, being bodily well, but mentally very defective.

CASE 2. *Chronic obstruction.*—A man aged forty-two years was admitted into the infirmary on July 31st, 1894. He gave a history of having been ill for twelve months with "wind in the bowels, vomiting, and costiveness." He gave up work at Whitsuntide, and took to his bed on July 22nd. His bowels had not been opened since then, but he had passed a little flatus up to the morning of the day of admission. On July 28th and 31st he had "injections" without result. There was no blood or discharge from the rectum at any time. He had been retching and vomiting constantly, six, seven, eight, or nine times a day, the vomited matter being brown and watery. Latterly he had suffered from hiccough. Pain had been very bad for the last week, chiefly paroxysmal. He had got much thinner. He passed very little urine, which was bloody. Many years ago he suffered from right hip disease, which had left the limb much shortened. On admission the abdomen was found to be uniformly distended and resonant. Intestinal coils were visible. The patient complained of a constant pain with paroxysmal exacerbations, referred chiefly to the right of the umbilicus. There were no hernia; the rectum was empty. There were constant retching and vomiting, the vomited matter being watery and containing bile, but not at all fæcal. He hiccoughed occasionally. He had not passed urine since admission. The patient was pale, thin, with an anxious expression and evidently of a very emotional temperament. The diagnosis was chronic partial obstruction of the small intestine. We were unable to arrive at any definite conclusion as to the pathological condition. Soon after admission a soap enema was administered, and it produced a large motion of ordinary consistence. Small quantities of milk-and-water were ordered. On Aug. 1st the patient expressed himself as being much better. He had slept in the night fairly well. The urine was acid and contained no albumen. On Aug. 2nd another enema was injected with good result. He was ordered white mixture, one ounce thrice daily. On Aug. 3rd he was sick again. The white

[1] Senn and White: Text-book of Surgery, vol. ii., p. 708.
[2] Abdominal Surgery, pp. 439-440.

mixture was omitted and yolk of eggs and milk, pancreatised, ordered. On Aug. 4th the sickness was worse, the vomited matter being liquid and brown, but not fæcal. An enema was given with but little result. He complained of abdominal pain, paroxysmal, which he referred to the umbilicus. He sat up in bed and rubbed his stomach vigorously at intervals. He was extremely emotional; at one time he thought he was going to die, and at another wanted to get up. On Aug. 5th the patient had been constantly vomiting. The vomited matter was brown, liquid, and offensive, like the contents of the small intestine, but not stercoraceous. He was put on nutrient enemata and was given ice to suck. On Aug. 6th, at the request of the patient and after consultation with Dr. Wallace, I performed median laparotomy. Finding nothing in the common situations of obstruction, the intestine was carefully examined from a point steadily fixed by Dr. Wallace. There was distinct evidence of peritonitis, but we were unable to determine the seat of obstruction. The wound was sewn up and the patient was ordered only to have ice to suck. A quarter of a grain of morphia was injected hypodermically at 7 P.M. On Aug. 7th the patient slept for six hours. He had not been sick, but had had some pain in the abdomen. He was put on nutrient enemata every four hours. On Aug. 8th the patient was very restless during the night. He had slight hiccough. He would not keep still, and got out of bed and took a large quantity of ice. He slept about one hour. There was no vomiting. On Aug. 9th the patient remained in much the same condition, notwithstanding the administration of sedatives. On Aug. 10th he was much quieter during the night, and slept at intervals. He had occasional abdominal pain. There was no distension of the abdomen, and no rise of temperature above 100° F. since the operation. On Aug. 11th the patient was very restless during the night. The nurse could not possibly keep him quiet. He was not sick. He had taken all his food. His bowels had not been moved since the operation until now, when from 4 P.M. till 9 P.M. they were opened thirteen times. A starch and opium enema was given. On Aug. 12th the patient was quieter on the whole; he slept two and a half hours in the night. The bowels were open seven times. He insisted on sitting up when using the bed-pan. He tried to get out of bed several times, and succeeded once, when he drank a large quantity of water. At 9 A.M. the patient was found to have several coils of intestine protruding from under the lower border of his dressing, which had not been touched since the operation. Chloroform having been administered, it was found that a suture had given way. The intestine was carefully washed, returned, and the wound resutured. The patient was much collapsed afterwards. A brandy enema was given and strychnine was injected hypodermically. On Aug. 13th the patient died at 2.35 P.M. The post-mortem examination was limited to the abdomen by request of the friends. The wound was somewhat unhealthy. There was recent peritonitis over the coils of small intestine beneath the wound. On removing the intestine an abscess cavity was opened lying between the liver, the hepatic flexure of the colon, and the duodenum. There were old peritoneal adhesions across the concavity of the hepatic flexure. The exact relationship of the abscess cavity could not be ascertained, but it seemed to originate from the hepatic flexure of the colon, the calibre of which was much narrowed, but not completely obstructed at one point. There were some clay-coloured fæces in the descending colon. There was no general peritonitis.

Remarks.—The regional diagnosis was fairly accurate. The obstruction was too near the beginning of the large intestine to permit of stercoraceous vomiting. What was the cause of the kinking of intestine and the abscess cavity? With clear evidence of old tuberculous joint mischief, a justifiable diagnosis would be tuberculous mischief of a mesenteric gland with kinking of intestine by old inflammatory adhesions. In the course of conversation with the patient he told me that he was in the habit of walking with the aid of a stick, and that he always leant forward and pressed his abdomen against his hand and stick at the point where the pain was chiefly felt—that is, in the immediate neighbourhood of the hepatic flexure of the colon. Is it not possible that this long-continued pressure may have been the cause of his abdominal trouble? May not this constant irritation have been the determining factor in establishing the tuberculous gland mischief?

Cardiff.

THE PSYCHOLOGY OF ANÆSTHESIA.

By LEONARD G. GUTHRIE, M.D. OXON., M.R.C.P. LOND.,

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IN THE LANCET of March 23rd Dr. Wyld has suggested that from the collection of psychological experiences of persons when under anæsthetics "most important facts may be arrived at as to the construction of an experimental psychology." In the annotation on the subject in the same issue doubts are expressed as to the feasibility of the suggestion, whilst the interest in the study of such dreams is admitted. I not only share these doubts, but fear that actual harm may result from the promulgation of Dr. Wyld's views. The habit of auto-intoxication by means of inhalations is already practised. Patent inhalations containing chloroform and eau de Cologne are sold to the public as cures for headache and neuralgia. Should the idea gain ground that the secrets of mental science may be divulged to those under the influence of anæsthetics inquests may soon be heard on journalists hard up for "copy" who have sought inspiration by such means. It is even conceivable that etherisation may replace hypnotism at drawing-room *séances;* that the burning social and moral questions of the age may be discussed under chloroform instead of Chian, as at the Socratic symposium, but possibly with more disastrous results than attended the feast at the house of Agatho the Athenian. It is doubtful whether any scientific result can be obtained from the record of the hallucinations, illusions, and delusions of those under the influence of drugs beyond that which the well-known phenomena of ordinary sleep supply. Natural sleep is probably dependent on the accumulation of ptomaines—the products of digestion and exercise—in the circulation, which dull the intellectual and motor centres of the brain. Anæsthetics and other soporific drugs only differ in action from the home-brewed articles in that they produce a state of mental and sometimes bodily exaltation which precedes sleep. Profound natural sleep is dreamless, so also is the sleep of one heavily drugged. Dreams are the result of impressions both internal and external in a half-awakened brain, which distorts and exaggerates them into a seemingly connected tale. A knock at the sleeper's door weaves itself into what seems to him a lengthy series of events, yet the knock both occasions the dream and wakes him up. It is common experience that the dreamer awakes at the most exciting incident in his dream. It is not the dream which wakes him, but the impression which gave rise to it. In a dream one may be tried, condemned, tortured, executed, and buried by Inquisitors or Red Indians, and wake to find an ache or pain the cause. The distressing paraplegic nightmare, in which one is pursued but cannot stir, is perhaps due to some uncomfortable posture of the legs which has caused them to "go to sleep." The clergyman dreams that he is preaching in his night-dress because he is conscious in a half-awakened state of actually wearing nothing else. Dreams under anæsthetics resemble the ordinary kind in that they are produced by partially felt impressions at the moment of awakening. A lady was once anæsthetised in my presence in order to have two teeth extracted. She came round immediately after the removal of the second wailing, "What is the use of it all?" Afterwards she explained that she had dreamed she died in great agony (tooth No. 1), that she had also been born again in equal pain (tooth No. 2), and that her remark was a protest addressed to the Deity. The whole period of extraction lasted less than twenty seconds. My own experiences illustrate the fact that dreams under anæsthetics are instigated by partially felt internal and external impressions. Once I had some post-mortem warts scraped from my hands under chloroform. I thought I was myself giving the anæsthetic whilst someone kept anxiously inquiring through a telephone, "Is he all right?" until I was in an agony of fear lest he might not be so. I thought that my hand was restrained (it was doubtless the case) whenever I attempted to give more chloroform. I heard the sound of the sharp spoon on the warts, but felt no pain, and thought they belonged to my patient. Afterwards I learned that my breathing had become embarrassed, and that the words, "Is he all right?" referred to me. The telephone was doubtless suggested by the sound of a musical rhythmical hammering

which in my case always accompanies partial anæsthesia. On another occasion, whilst under ether, I became a noble lord seated in a magnificent chariot in the "Row" at the height of the season. I was hopelessly and deplorably intoxicated, and yet became aware that an attempt was being made to photograph me in this undignified condition. I shouted to the coachman to drive on, but instead of obeying he and the footmen pressed a mask over my face. I smelt ether, and struggled madly to prevent them taking the photograph, which I thought was being done for a wager and would be all over London next day. The words "Drive on" were addressed to the operator by the anæsthetist, and doubtless suggested the dream. Such is the probable explanation of dreams under anæsthetics. If so, they are not to be distinguished from ordinary dreams, and cannot shed fresh light upon the problem of the relationship between mind and matter, as the experiences of Davey and Symonds would appear to suggest. The subjective sensation that the mind is divorced from the body, common in ordinary as well as in dreams under anæsthetics, cannot be held as an argument that such may be the case. In deep sleep the mind is practically dead; when sufficiently awakened to receive impressions it shows its dependence upon matter by acting upon the impressions received. Dreams usually occur in the waking stage of anæsthesia, or at least these are best remembered, but they doubtless also accompany the stage of excitement. The latter varies in individuals. Some give vent to peals of laughter, others wail like lost souls, and some show signs of furious rage. I have reason to believe from my own experience that this condition may be beyond measure distressing. I had ether for the first time when a second year's medical student. Some teeth were to be extracted. I was rather anxious to show that I knew too much about the process to give any trouble, and remember feeling irritated that my remarks whilst taking the ether met with no response. I said my sensations were very pleasant, whereupon the anæsthetist laughed, or I thought he did. In a moment I conceived the idea that I was being "hocussed" for some nefarious object. I was out of the chair in an instant in spite of efforts to control me, and made for the door fighting wildly round the room, shrieking for help, and, I regret to add, swearing horribly. I knew perfectly well where I was, but had wholly forgotten the purpose for which I had come. I knew the operators well, and can see their faces yet: the anæsthetist highly amused, the dentist annoyed, for I struck furiously at his face and, I believe, hit him. I was convinced that I was fighting for my life and that they would not let me leave the room alive lest I should expose their infamous designs. Then the fit of mania, for such it was, ceased as suddenly as it began, and I submitted to be tied in the chair for fear of another outburst, which, however, did not occur. I know now what it is to have been an acute maniac, to be conscious of one's surroundings, to have the use of one's limbs, and apparently of one's senses, and yet to act on false inferences drawn from the distorted impressions of a drugged mind.

It is only natural that the dreams of the majority whilst under anæsthetics should be more spiritual than mine, for the majority of patients look upon the anæsthetist as probably their executioner and on the operating table as a likely death-bed. Yet their experiences and mine are equally valueless for the furtherance of science. The impressions of a savage running "amok," of a De Quincey who feebly excuses his vice on the ground that it exalts his higher functions, are of equal clinical interest with the dazzling visions of a dying saint or the alcoholic's snakes and vermin. All are equally true to the subjects, equally false in reality. I have seen a child who had helped herself to belladonna and glycerine, mistaking it for jam. She threw herself about the bed, now shielding her face and shrieking, "Take the great bird away!" then screaming with laughter, clapping her hands, and calling, "There's uncle down in the field by the gate; come to me, uncle!" Another child in a like condition staggered about the room, smiling, whistling, and singing snatches of songs. Most of his babble was unintelligible, but I caught the words "Hampstead Heath" several times, and he evidently imagined himself there. He pointed to a corner of the room and said, "There's a bird! No; it's a fish." Such visions, together with those of apparitions and supernatural occurrences generally, which the Psychical Society are not able to explain, are alike dependent on the working of a disordered mind. The mind, its morals, reasonings, and special senses, are dependent on the integrity of the matter which holds it. If the matter is bound or stimulated, μανδραγόρα ἢ μέθη ἤ τινι ἄλλῳ, so also is the mind fettered, or, it may be, unchained. To base an experimental science of psychology on the evidence of dreams, whether of the sound or unsound mind, is to start on false premisses, to appeal from Philip sober to Philip drunk, and Philip himself reversed this order of things.

Upper Berkeley-street, Portman-square.

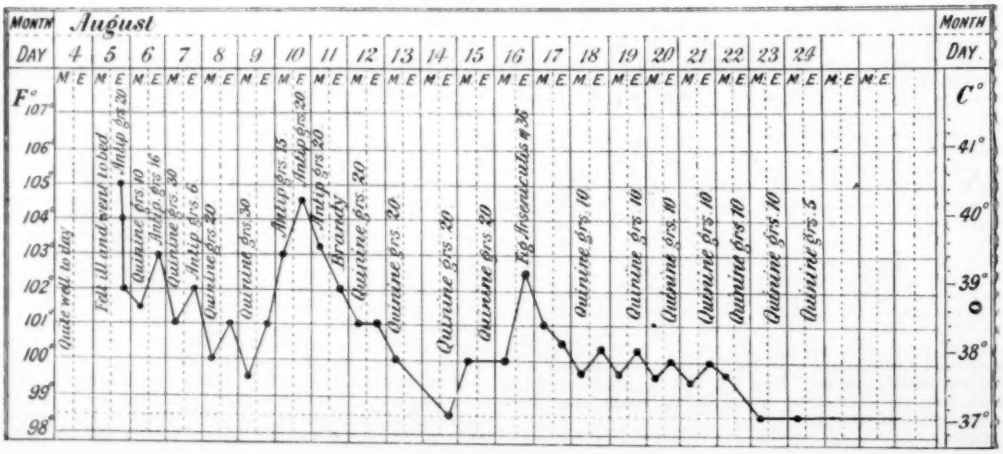
MALARIAL FEVER AMONG WHITE MEN IN WARRI, WEST AFRICA,

From Aug. 1st, 1893, to July 31st, 1894.

BY FELIX N. ROTH, M.R.C.S. ENG., L.R.C.P. LOND.,
DISTRICT MEDICAL OFFICER AT WARRI, NIGER COAST PROTECTORATE; LATE HOUSE SURGEON, ST. MARY'S HOSPITAL, PADDINGTON.

WARRI is situated on the delta of the Niger, about 5° N. by 5° E. It lies on the bank of a river 300 yards across, forty miles from the sea, and ten feet above the sea level. There are two tides daily, which rise and fall from four to eight feet. The following meteorological chart has been taken from my own observations and when compared with the fever table may be found interesting, showing at what time of the year the malarial fever has been most prevalent. The highest temperature registered in the sun and noticed on many occasions was 175° F.; the highest temperature in the shade was 103°; and the lowest temperature registered at night was 68°. On several occasions during the tornado season the temperature has fallen from 40° to 60° in the course of half an hour.

TYPICAL MALARIAL FEVER CHART.



On an average not more than sixteen white men are ever there at the same time during the year. I have selected for this paper seventy-two of the most severe cases of fever, as the results of these will teach more than if all the mild ones had been mentioned. I have divided the fevers into two classes—viz., (1) fever and ague, and (2) African malarial fever, which includes the intermittent and remittent types. Only one case of the former came under my observation during the twelve months, and I shall therefore only mention and describe the latter in the subjoined tables. Each patient is numbered as he came under my charge, and his age is given as well as the time he has been in West Africa and the time he has been in Warri. The number of times each patient has had fever in each month is also shown. The cases entered in the column headed "Number of years each man has been in West Africa" have generally been away from the coast every two or three years for some months.

From the time a man arrives in Warri till he leaves again he is in a chronic state of perspiration, and as long as this is going on he may be certain he is not suffering from fever. During my short experience in Warri I have found that the only treatment is to force this healthy action of the skin, and in nearly all malarial cases, when this has been proceeding, the patient has been considered out of danger.

The fever observed in Warri is remittent and intermittent. The temperature rises generally many degrees, always once daily, but in a few cases I have noticed this to happen twice during the twenty-four hours. The rise mostly takes place between 12 noon and 6 P.M., but this is not a hard-and-fast rule. The following is a typical initial stage of the fever. The patient feels dull and heavy; there is great malaise, with neuralgic pain in the head, face, and eyes; sometimes there are headache and vomiting, great pain over the region of the kidneys, liver, and spleen, as well as

TABLE I.—*Local Temperature Chart from Aug. 1st, 1893, to July 31st, 1894.*

(Monthly Averages in Degrees Fahrenheit.)

Month.	Taken at 7 A.M.			Thermometer.			Taken at 6 P.M.			State of weather.	Rain in inches.
	Thermometer.						Thermometer.				
	Dry bulb.	Wet bulb.	Wind.	Highest in sun.	Highest in shade.	Lowest at night.	Dry bulb.	Wet bulb.	Wind.		
August	74·2	73·0	E.	141·0	85·0	71·7	76·5	74·5	W.	Wet	20·8
September	74·4	73·7	W.	140·0	84·6	71·0	76·7	74·6	W.	Wet	18·75
October	74·0	73·4	E.	150·0	88·3	70·4	77·4	75·0	W.	Wet	16·72
November	73·9	73·8	E.	158.3	93·3	72·2	80·0	76·6	W.	Fine	4·3
December	74·7	74·2	E.	150·9	93·2	72·3	80·0	77·1	W.	Wet	8·93
January	72·2	72·0	W.	149·7	93·0	70·5	81·1	77·2	W.	Fine	0·23
February	74·6	74·3	W.	153·8	95·9	73·0	82·5	78·6	W.	Fine	3·03
March	75·2	74·8	E.	153·1	94·2	72·8	80·4	77·0	W.	Fine	5·55
April	76·4	75·4	E.	158·3	94·1	72·6	80·3	77·2	W.	Wet	6·35
May...	74·8	73·9	S.W.	154·7	92·1	72·2	79·7	76·9	S.W.	Wet	22·86
June...	74·4	73·6	S.W.	145·8	88·1	71·9	78·3	75·2	S.W.	Wet	16·41
July	73·6	73·0	W.	153·7	88·4	71·6	78·0	74·2	W.	Wet	6·74
Average for the year...	71·9	73·6	—	151·0	90·0	71·8	79·2	76·2	—	—	130·96

TABLE II.—*Malarial Fever Table, with Monthly List of each Patient's Attack.*

Patient.	Age.	Time in West Africa.		Time in Warri under my charge.		1893.					1894.							Total number of times.
		Years.	Months.	Years.	Months.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.	
1	29	4	6	—	6	—	—	—	—	—	—	—	—	—	—	—	1	1
2	25	4	—	—	6	1	1	—	—	—	—	—	—	—	—	—	—	2
3	24	2	—	—	3	1	—	—	—	—	—	—	—	—	—	—	—	1
4	25	2	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	1
5	27	—	—	1	—	1	2	2	2	—	3	—	—	—	—	—	—	10
6	24	—	—	—	8	—	1	—	1	—	1	—	1	—	—	—	—	4
7	36	16	—	1	—	—	—	1	1	1	—	—	—	—	—	—	—	3
8	21	2	—	—	4	—	2	1	—	—	—	—	—	—	—	—	—	3
9	38	—	—	—	—	—	—	1	—	—	1	—	—	—	—	—	—	2
10	23	5	—	—	6	—	—	1	1	—	—	—	—	—	—	—	—	2
11	30	9	—	1	—	—	—	2	1	—	2	1	—	—	—	—	—	6
12	25	1	—	—	6	—	—	1	2	2	1	—	—	—	—	—	—	6
13	24	3	—	—	8	—	1	—	2	1	—	1	—	—	—	—	—	5
14	21	—	—	—	6	—	—	—	1	1	—	—	1	—	1	—	—	4
15	26	5	—	1	—	—	—	—	1	1	1	—	—	—	—	—	—	3
16	24	—	—	—	4	—	—	—	1	1	—	—	—	—	—	—	—	2
17	24	2	—	—	6	—	—	—	2	2	—	—	—	—	—	—	—	4
18	30	9	—	1	—	—	—	—	—	1	3	1	—	—	—	—	—	5
19	29	5	—	—	6	—	—	—	—	—	2	—	—	—	—	—	—	2
20	27	2	—	—	2	—	—	—	—	—	1	—	—	—	—	—	—	1
21	25	2	—	—	2	—	—	—	—	—	1	—	—	—	—	—	—	1
22	24	5	—	1	—	—	—	—	—	—	—	—	1	—	—	—	—	1
23	21	—	—	—	3	—	—	—	—	—	—	—	1	—	—	—	—	1
24	21	—	—	—	3	—	—	—	—	—	—	—	—	1	1	—	—	2
Total ...	—	—	—	—	—	4	7	9	15	10	16	3	4	1	2	—	1	72

over the whole of the back and down the backs of the thighs and legs; and there is often pain in all the joints. The onset is always sudden. Some patients struggle against the malaise; many give in at once and go to bed. There is often great fear of death (especially in the case of new arrivals); others become frightened when they notice the urine discoloured or when the vomiting is severe, the latter causing severe spasms over the abdominal region. The skin is dry and harsh to the touch. There is nearly always constipation, but this generally precedes the fever. In nearly every seizure that has come under my notice I have used the treatment to be presently described, and have found it absolutely successful except in the case of the patient marked No. 14 in Table II., who had been about three weeks on the coast when first attacked by fever, and was a healthy, full-blooded man twenty-one years of age. On my arrival his temperature was about 102° F. All the drugs which were considered useful were tried, but none seemed to have any effect. He took slops well, but after a few days was inclined to be despondent. This condition lasted for fully fourteen days, his temperature varying from 100° to 103°—seldom lower, but never higher—and his skin remaining harsh and dry all the time. As his condition was now becoming worse more stimulants were given. He was sponged three and four times daily with the coolest water procurable (which is not very cold in Warri), and I cheered him up to the best of my ability. This stimulating treatment was continued for several days; his temperature fell, and he was at his work again in less than a week.

The treatment observed with all the other patients was as follows. If there was much vomiting or pain, from a quarter to half a grain of morphia was given either by the mouth or hypodermically, and when this had taken effect from two and a half to five grains of calomel with colocynth and a quarter of a grain of podophyllin, together or singly, were administered. The patient being in bed, a hot-water bottle or bag was applied to his feet and another over the spleen, and he was then well covered with blankets. As soon as the stomach had settled itself (generally within half an hour after taking the morphia) from ten to fifteen grains of antipyrin were taken, followed by a large cup of weak tea. Sometimes this dose was repeated, either in consequence of being vomited or if in twenty or thirty minutes the patient did not sweat. In every case the action of the skin took place after the first or second dose. Ten-grain doses of sulphate of quinine were administered three, four, or five times daily till the patient felt symptoms of cinchonism. In some cases the antipyrin treatment had to be repeated for a day or two when the temperature rose at all and the skin refused to act well, but this seldom happened. As the temperature fell the quinine was reduced. Stimulants, unsweetened condensed milk (the climate is too deadly for cows), and meat extracts were the diet. The patient was generally at work again under a week, unless it had been a very severe case and there was much weakness. The highest temperature I have registered was 106·8°, but this is an exception; in most of my patients it has seldom risen above 105°. In a few cases delirium appeared. I have noticed it on the first or second night, but it is doubtful whether this was due to a high temperature, as it has occurred when the temperature was only from 100° to 102·5°, and one patient had delirium when his temperature was slightly subnormal. The fever runs its course in from two to thirty days, during and after which time there may be kidney, liver, and spleen complications requiring treatment according to their respective symptoms. The drugs which to me seem to have given the best results are calomel, morphia, antipyrin, and quinine. The after-treatment consists in administering arsenic, strychnia, some dilute acid, iron in its different forms, and the hypophosphites. Cod-liver oil is a most useful tonic; patients seem to take it well, and good results are obtained. Parrish's "chemical food" made up as a pill is a useful drug and is easily taken in this form.

The hot, moist climate of Warri acts injuriously on the drugs, especially on the liquid ones, and I therefore order them as solids. I have tried them in tabloid, gelatine, and palatinoid form, and prefer the last because they are easily swallowed, because they leave no disagreeable taste in the mouth, because, not being compressed, they act quickly, because they are easily dispensed, and because, when sent out in glass-stoppered bottles, they keep better than any other form of drugs in the West African climate. One drug in particular which I have had to use in so many cases—morphia quarter-grain palatincids — was in as perfect a condition after sixteen months on the West Coast as it was on the day it arrived.

A typical malarial fever chart is appended.

Oxford and Cambridge-mansions, Hyde Park, W.

CEREBRAL TUMOUR; OPERATION; DEATH FOURTEEN HOURS LATER WITH SYMPTOMS OF IMPLICATION OF MEDULLA.

BY E. N. NASON, M.B. CAMB., M.R.C.S. ENG.

A MAN aged forty-three years, while walking in the fields in July, 1894, thought he felt something in his left boot. While taking the boot off twitching began in the left heel and extended up the leg to the thigh. The twitching lasted about ten minutes. A month later he had a second similar attack, and afterwards attacks became more frequent, sometimes two occurring in one day. There was temporary paresis of the left leg after each attack, but no permanent trouble except some stiffness and a tendency to catch the toes when walking. He had no loss of consciousness and no headache, but suffered occasionally from what he called "biliousness." On one occasion, just before Christmas, the left arm became affected in a similar way, and in January, 1895, the muscles on the left side of the trunk also. The face was never affected until Feb. 2nd, on which day, while travelling by train, he had a very severe attack affecting the whole of the left side and accompanied by cyanosis and loss of consciousness lasting some minutes. It was after this attack that he first came under my care. The following conditions were then noted. On Feb. 10th there was paresis of the left leg, the extensors of the foot being most affected. There was no loss of power in the left arm or left side of the face or tongue. There was no affection of speech, no headache, and the mind was quite clear. The left knee-jerk was much exaggerated and the right perhaps more easily obtained than natural. Ankle-clonus was well marked on the left side, but was absent on the right. Plantar reflexes were present. The urine was free from albumen. There was no optic neuritis, but the retinal veins seemed fuller than natural. He denied the possibility of syphilis, but admitted a previous occasional alcoholic excess. He was put upon iodide of potassium, fifteen grains three times a day. By the end of the month there was further loss of power in the left leg; there had been several convulsive attacks, limited almost entirely to the left arm and left side of the trunk, and there was distinct paresis of the left shoulder muscles, with a feeling of clumsiness in the left hand. The grasp of the left hand, however, remained strong. Early in March he began to suffer from more or less constant headache, vertical in position, but slightly more marked on the right side. There was no area of superficial tenderness. Vision remained good, and there was no paresis of the ocular muscles, though much difficulty in fixing the eyes during examination. The pupils were equal and reacted to light. The head constantly rotated to the left while the eyes were being examined. There was slight facial paresis. On March 8th complete paralysis of the left arm was found, having come on almost suddenly. The paralysis of the left arm, now found for the first time, was absolute, while that of the leg, though of much longer duration, was not quite complete. Slight tenderness on pressure over the head on the right side of the vertex was noticed, otherwise the patient's condition remained unaltered until March 18th, when he complained of a little wheeziness and expectorated some frothy mucus. He thought he had "caught cold," but there was no other indication of catarrh.[1] He was still taking iodide of potassium. On March 20th the patient showed signs of general cerebral compression, as indicated by mental hebetude (once), involuntary micturition, and deep, almost stertorous, breathing. The expectoration of frothy mucus still continued. There was no rise in temperature. On

[1] This may have been an indication of interference with the vagi through compression of the nuclei in the medulla.

March 21st the symptoms of general compression were much less marked. The patient discussed the question of operation rationally, and asked that something might be done at once. The right optic disc showed slight swelling not noticed before; the left remained unaltered. On March 22nd Mr. Gilbert Barling examined the patient with me, and agreed both as to the diagnosis of cerebral tumour and its locality and the advisability of operation. The patient, having been prepared the night before in the usual way, was anæsthetised with chloroform, and a horseshoe-shaped flap, including pericranium, was turned down, exposing the bone over the region of the right fissure of Rolando. After the hæmorrhage had been controlled and the flap wrapped in hot cyanide gauze, two discs of bone were removed with a 1 in. trephine. The discs were ½ in. apart and situated on either side (horizontally) of what was judged to be a point immediately over the upper limit of the centre for the left arm. The two holes were united by Hoffmann's forceps and the opening in the bone increased by the same means till it measured 3 in. by 2 in. There was free oozing from the diploë at the anterior edge of the divided bone, but little elsewhere. This was checked by pressure with a pad of gauze. The dura mater, which looked unduly dark, bulged into the opening, felt very tense, and exhibited only a very faint pulsation. The dura mater was divided, and a flap turned up exposing the cortex, which bulged into the opening thus made and pulsated but feebly. Two large veins, much distended with dark blood, crossed the exposed cortex, and between these an incision was made which, a quarter of an inch beneath the surface, opened a large tense cyst without any definite wall. The cyst or cavity was situated immediately beneath the Rolandic area, and contained some three or more ounces of clear amber-coloured fluid, free from blood. The cavity passed deeply in the direction of the right lateral ventricle, but no solid growth or thickening could be felt. After the evacuation of the fluid the space appeared to close completely, and the pulsation of the brain became distinct. The cavity was kept free to drain itself by means of a strand of cyanide gauze; one stitch was placed in the dura mater, and the external flap replaced and fixed by silkworm-gut sutures and the wound dressed with cyanide gauze and wood-wool wadding. The operation (at which Mr. Barling very kindly assisted) occupied one hour and six minutes, and was well borne. After being conveyed to bed the patient soon began to regain consciousness, and intimated that he wished to pass water, which he did naturally. Up to 6 P.M. he seemed to be going on very satisfactorily. The dressings had twice become saturated with cerebro-spinal fluid, and the outer portions were changed by the nurse. The pulse was steady and between 60 and 70 per minute. The respiration was 20 and natural, and the temperature 99·4° F. Quite suddenly, at 6 P.M., the character of the respirations changed, some cyanosis was noticed, and the temperature rose to 103·4° in the left and 102·2° in the right axilla. At half-past seven mucus began to collect, and the temperature rose to 105° in the left and 104° in the right axilla, and the respiration to 43 per minute. There was no vomiting or any sign of convulsion, but unconsciousness had returned. At 10 P.M. breathing became still further embarrassed, and the intercostal muscles, which had previously been inactive, suddenly began to act vigorously. The temperature had risen to just short of 106° and 105° on the left and right side respectively and the respirations to 54 per minute. There was but little change from this condition till 4.25 A.M., when the pulse, which was being taken at the time, gave a bound and stopped suddenly. The respiration continued one minute after cessation of the pulse. The temperature registered 106° and 105° after death on the left and right side respectively.

It seems probable that the course of events in this case was the following. First, the slow development of a simple cyst in the right cerebral hemisphere with increase of intracranial pressure; that this gave way into, or formed a connexion with, the right lateral ventricle on Feb 2nd, occasioning the very severe convulsive seizure accompanied by cyanosis and unconsciousness, &c.; that a communication with the ventricles subsequently existed, keeping up an increased intraventricular pressure, which was present until relieved by the operation; and that the sudden relief of pressure was followed by œdema of the centres located in the floor of the fourth ventricle, with a consequent interference with their action, leading to the fatal result recorded.

Nuneaton, Warwickshire.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF INSOMNIA.

By M. CHARTERIS, M.D.,
PROFESSOR OF MATERIA MEDICA AND THERAPEUTICS IN THE UNIVERSITY OF GLASGOW.

A MAN aged thirty years consulted me on Oct. 15th, 1893, suffering from insomnia. He told me that he had always been a light sleeper, but to this he paid no particular attention; but owing to an unhappy circumstance he began to suffer from sleeplessness, which grew upon him to such an extent that it had been common for him, during a period of eight months, to have no sleep for a week at a time. In the month of May, 1892, he was advised to take sulphonal, of which he took in all from thirty to forty capsules of five grains each. His condition did not improve, and, acting on medical advice, he tried, during June, July, and August, bromide of potassium every night in a dose of twenty grains, but obtained only from one to three hours' sleep. The effect of the bromide seemed to be wearing off. He discontinued its use and went to the country for ten days. During these ten days, although free from all business, he had only one night's sleep of four hours' duration, and on returning to business in the beginning of September his condition became very serious. "By this time," he stated, "my head had become strange and work was a matter of difficulty. At night my heart beat so loudly that no matter in what position I lay I could hear it. During the day I was dizzy and full of morbid fears. Something ticked in the left temple and the eyes felt hot and fiery. At the end of September I had sunk into a state of depression, and, dreading to go to bed, wandered about the streets, had lost hope and formed resolutions of which I do not like to think now, and for which I can offer no very satisfactory explanation, yet they were as real and natural as sober and sensible thoughts are to a person in good health." When I saw him he was certainly in a very depressed and morbid state of mind, but he promised to follow my injunctions. These were as follows: to take an alterative pill of mercury and podophyllum at 4 P.M. on one day and on the following night six drachms of chlorobrom at bedtime. He was requested to return at the end of a week and to bring with him notes of his case. This he did, and I found that a six-drachm dose had each night secured a sleep of five hours' duration. He continued to take this dose for five weeks, and each night had the same average amount of sleep. At the end of five weeks I considered it advisable to decrease the dose to four drachms nightly. He took this dose for four weeks, and the average amount of sleep remained the same. Then for four weeks the dose was reduced to one drachm, and with this small dose he had from five to six hours' sleep. On Jan. 19th, 1894, he saw me again, and gave me a tabulated statement of his doses for three months. This, though interesting and instructive, would be too lengthy for insertion, but it bore out completely his verbal statements. In the month of June last he called again. He was then able to secure refreshing sleep without the hypnotic and his physical and mental condition was perfect. Work was again a pleasure to him and life was worth living.

Note.—In a similar way I have treated successfully less pronounced cases of insomnia. The habit of taking the solution does not grow on the patient, and its exhibition is attended by no depression or derangements of digestion.

Glasgow.

POISONING BY EXALGINE.

By F. GRAHAM CROOKSHANK, M.R.C.S.ENG., L.R.C.P.LOND.

A SINGLE woman aged thirty, extremely thin, was under my care for severe asthma and consequent insomnia. On May 3rd of this year she was given by a friend, without my knowledge, five grains of exalgine. Within five minutes "she

screamed out, becoming perfectly stiff." Twenty minutes later, when I saw her, she was profoundly unconscious, her respiration being very shallow and infrequent and rapidly failing. The lips and finger-tips were markedly cyanosed and the extremities were cold; the pupils were widely dilated and fixed; the knee-jerks were absent; the pulse was 95, small and feeble. One-fifth of a grain of apomorphine was given at once, but failed to produce emesis. Free stimulation with brandy and coffee, vigorous flagellation, faradaisation, and occasionally artificial respiration were employed for three hours, at the end of which time the cyanosis had nearly disappeared and respiration was fairly well established. The patient, when roused, was incoherent and failed to recognise her surroundings, rapidly relapsing into unconsciousness. About an hour afterwards there was an evident tendency to heart failure, the pulse dropping repeatedly below 50 and becoming irregular and feeble. Ether was given at regular intervals hypodermically. Nine hours after taking the drug the pulse and respiration were both good, the pupils reacted well, and the knee-jerks were present. No urine could be drawn off with a catheter. The next day the patient was perfectly well except for aphonia, which lasted for some hours. The points of interest in the case appear to be the rapidity of the onset of the toxic effects and the evident danger in giving even moderate doses of exalgine—a respiratory poison—to asthmatics.

Leysfield-road, W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum allorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

TUBERCULOUS ULCERATION OF THE BLADDER TREATED BY SUPRA-PUBIC CYSTOTOMY AND CAUTERISATION.

(Under the care of Mr. C. MANSELL MOULLIN.)

THE number of cases in which it is necessary to perform supra-pubic cystotomy for the treatment of tuberculous disease of the bladder is limited. Usually it is possible to deal satisfactorily with the condition without operation, especially by means of iodoform emulsion or perchloride of mercury and other injections, or in the female by the application of solutions of lactic acid applied through the urethra. The operation has been carried out for two conditions—(1) tuberculous disease of the mucous membrane of the bladder of unknown extent associated with signs of tubercle elsewhere; and (2) tuberculous disease occurring in the form of a single large ulcer or of several ulcers, the disease being apparently limited to the interior of the bladder, and there being no manifestations elsewhere. In the first of these groups the operation could not be expected to prove curative, yet the record of a case given by Reverdin is very encouraging; both testes and cords were affected, the prostate was diseased, and a perinephritic abscess subsequently developed. The supra-pubic fistula was difficult to close, yet at the end of two years the patient could retain urine for from one hour and a half to two hours, and passed urine which was quite clear without pain. The second group gives a better prospect of cure, but the rarity of the condition is proved by the fact that Mr. Moullin's case affords the second example only of this operation that has been published in this country since Mr. Battle's successful case in 1890. That cauterisation is not essential is evident, as the case under the care of the former surgeon, we learn, continues in good health, but it has been generally used after the cystotomy. Cases which may be added to the list of those given by Mr. Moullin are mentioned by Reverdin,[1] Ivesen (1), Schatz (1), Trendelenburg (3), Guyon (2), Poncet (1), and Roux (1). Dr. L. Bolton Bangs[2] has also written on the subject.

A woman twenty-two years of age was admitted into the London Hospital in January, 1894, suffering from cystitis. Her illness began three years before with an attack of hæmaturia which lasted upwards of six weeks. Apparently it was caused by lifting a heavy weight. At the same time micturition became more frequent. There was no pain, but she grew weak and ill and was unable to continue at work as a domestic servant. A few months later, after resting at home, she began to suffer from pain shooting down the right leg from the loin. Micturition became more and more frequent, until at last it took place nearly every hour. Each act was attended by intense smarting, felt chiefly at the neck of the bladder and continuing for some time after the bladder was emptied. Blood made its appearance again. The urine became foul and loaded with mucus; and for the six months previous to admission the suffering was so great that she was almost confined to bed, any attempt at walking causing intense dragging pain over the pubes. The patient was slightly built, but fairly well nourished. There was no history of previous illness of any importance. The lymphatic glands were not enlarged, the heart and lungs were normal, and there was no history of phthisis in the family. The hypogastric region was very sensitive to pressure, but there was no tenderness over the kidneys on either side. Micturition was exceedingly frequent, night and day, and was accompanied by the greatest suffering. The average amount of urine passed in twenty-four hours was only twenty-five ounces of 1015 specific gravity. It was alkaline in reaction, always contained a large amount of blood intimately mixed with it, and threw down a heavy precipitate of blood, mucus, pus, and phosphates. Microscopic examination showed the presence of tubercle bacilli upon one occasion. Benzoate of ammonia was given internally and the bladder was washed out at regular intervals with boracic acid and lactic acid, but without result. No improvement followed, and as the patient, who had been under treatment for many months, was beginning to lose weight, it was determined to explore the bladder under an anæsthetic. A number of ulcers coated over with an adherent, bloodstained, caseous deposit were found just inside the orifice. A week later supra-pubic cystotomy was performed. The sides of the bladder were held apart with sutures passed through the edges of the muscular coat; a Fergusson's speculum was introduced through the wound, and all the ulcers that were accessible were scraped and cauterised with Paquelin's cautery. Those that were situated on the anterior surface of the bladder, and which could not be reached in this way were scraped with a Volkmann's spoon, and then iodoform was thoroughly rubbed in. All the ulcers were situated near the orifice of the bladder; there were none to be seen or felt on the fundus. The lower angle of the wound was left open and a drainage-tube introduced into the bladder; the rest was sutured and dressings of sal alembroth gauze and wool applied. The tube was shortened on the third day and removed a few days later. Urine, acid in reaction, was passed naturally on the fifteenth day, and at the end of three weeks the wound was soundly healed and the patient was allowed to get up. At first there was considerable pain on micturition, but this soon wore off. Five weeks after the operation the patient passed urine four times during the day and twice at night. Six months later, when she was seen again, the frequency during the day remained the same, but she had to rise only occasionally at night. The urine was acid and contained only a little mucus, and the patient had gained flesh and strength.

Remarks by Mr. MANSELL MOULLIN.—The number of cases in which supra-pubic cystotomy and cauterisation have been performed for tuberculous disease of the bladder is not very large. Guyon[3] has recorded two; Reverdin[4] one; Battle[5] one, in which owing to the size of the ulcer, chloride of zinc was used instead of the actual cautery; Pilcher[6] four; and Bell[7] three. In three cases Bardenheuer[8] has dissected away the entire mucous membrane, practically abolishing the bladder, for very little of the lining was reproduced. In nearly every case of cauterisation the results as reported were good, and there can be little doubt that in many instances this operation might be resorted to with advantage at a much

[1] Sajous' Annual of the Universal Medical Sciences. 1893, vol. iii., E 19.
[2] Journal of Cutaneous and Genito-urinary Surgery. May, 1892, New York.
[3] Leçons Cliniques sur less Affections Chirurgicales de la Vessie.
[4] Annales des Malacies des Organes Génito-urinaires, January, 1888.
[5] Transactions of the Clinical Society of London, 1890.
[6] New York Medical Journal, March, 1892.
[7] Journal of Cutaneous and Genito-urinary Disease, August, 1892.
[8] Centralblatt für Gynäkologie, No. 14, 1894.

earlier period than it usually is. Ulceration of the bladder attended by strangury and hæmaturia is of not uncommon occurrence in young adults of both sexes; and in a large proportion of cases yields readily to local and palliative treatment. In these the ulceration is not tuberculous, or, if it is, the ulceration is very recent and involves only the most superficial layers of the mucous membrane. When the disease has lasted some time, as in the present instance, and has affected the whole thickness of the mucous membrane, and perhaps the submucous tissue as well, leaving deep ulcers coated over with a dense adherent layer of caseous débris, pus, and phosphates, the momentary application of dilute solutions of lactic acid or other drugs can be of no avail. They can never penetrate unaided through the protecting layer. In such cases the prognosis is so unfavourable, the suffering as the disease advances so intense, and the risk of supra-pubic cystotomy as it is performed at the present day so slight, that it is difficult to understand why it is not more frequently resorted to. Tuberculosis of the bladder may not be common as a primary affection. It is usually regarded as secondary to disease of the kidneys or (in males) of the genital organs. But the fact that many of the cases in which it has occurred have been women, who do not suffer in the same way from genital tuberculosis and whose kidneys were healthy, makes it rather doubtful whether in the case of men there is not a tendency to exaggerate the secondary character of the disease. The neck of the bladder is involved more frequently than the fundus, not because of the proximity of the orifices of the ureters or of the vasa deferentia, but because its blood supply is so much larger and it is so liable to attacks of congestion, and because its functional activity is so much greater.

MANCHESTER ROYAL INFIRMARY.

SECONDARY HÆMORRHAGE IN A CASE OF ACUTE PERIOSTITIS OF THE FEMUR; LIGATION OF THE COMMON FEMORAL ARTERY; RECOVERY; REMARKS.

(Under the care of Mr. F. A. SOUTHAM.)

ACUTE periostitis usually attacks the lower end of the femur and leads to extensive necrosis unless the patient is subjected to early operation. The upper end of the femur is not often the seat of this variety of disease, and when abscess does form there may be considerable difficulty in making certain that pus has collected, for, in consequence of the thickness of the muscular covering, fluctuation is not easily felt. This case is, so far as we know, the only one of the kind in which ligature of the common femoral artery has been resorted to with success for severe secondary hæmorrhage, and is therefore of very great interest. The circulation of the limb does not appear to have been embarrassed by inflammatory swelling round the wound, which seems to have kept free from septic changes throughout. Four causes of severe secondary hæmorrhage in such cases have come under our notice in the past—viz., (1) wound of a vessel of some importance, when making the incision or counter-opening; (2) ulceration, the result of pressure of a drainage-tube; (3) softening of the wall of an artery exposed to a septic wound; and (4) ulceration as a result of pressure of a sequestrum. For the notes of this case we are indebted to Dr. W. A. Wilkinson, late house surgeon.

The patient, a boy five years of age, was admitted to the Manchester Royal Infirmary on the evening of May 10th, 1894, suffering from acute periostitis of the shaft of the femur. On examination the upper third of the left thigh was found to be the seat of a circumscribed swelling which was slightly œdematous, intensely red, and accompanied by great heat. The boy held his thigh in the flexed position. No evidence of fluctuation could be detected. The constitutional disturbance was not considerable, though during the night he was very restless, repeatedly asking for liquid, and complained of pain in the affected thigh. Lead and spirit lotion was kept constantly applied. The next day, May 11th, the inflammatory redness had disappeared; the patient seemed much more comfortable, but the swelling was slightly larger. There was no distinct fluctuation. The temperature in the morning was 100° and in the evening 102·6° F. On May 12th it was decided to explore the swelling. An incision was accordingly made, under chloroform, on the outer side of the thigh down to the bone, and forty ounces of pus were evacuated. The shaft of the femur was found to be quite bare for a considerable extent. A counter-opening was made on the inner side, and a piece of drainage-tubing was passed from the outer to the inner opening and the cavity well syringed out with perchloride solution. On May 13th the temperature in the morning was 98° and in the evening 100°. On syringing the cavity with perchloride solution there was a slight discharge of laudable pus. On May 14th the temperature in the morning was 98·8° and in the evening 102·6°. The cavity was syringed again. On May 15th, at 2.30 A.M., it was found that hæmorrhage had occurred, the whole of the dressings and the bed being saturated with blood. The bleeding was very profuse and came from both openings. An Esmarch's tourniquet was applied to the limb, and, the bleeding having been arrested, the tube was removed, and both wounds were freed from clots and packed tightly with iodoform gauze. Pressure with pads was applied, and the whole limb bandaged from the foot upwards and placed in a raised position. The tourniquet was then taken off. The patient was much collapsed, with a rapid, feeble, and fluttering pulse, shallow and sighing respiration, and great blanching of the skin and mucous surfaces. The usual treatment was adopted—viz., the head was kept low, hot bottles were applied, and fluid nourishment was given in small quantities. From May 15th to June 2nd all went well, and no further hæmorrhage took place. The wound had been dressed daily, the discharge gradually diminishing, and the sinuses appeared to be granulating up. The condition of the patient was also very much improved. However, on June 3rd he had another very severe attack of hæmorrhage, which recurred on the 5th and on the 7th. On each occasion pressure had to be applied to the femoral artery, and the sinuses freed from clots and packed with iodoform gauze. The boy's condition was now worse than before, and as consent for amputation was refused, and it appeared probable that any further recurrence of the hæmorrhage would rapidly prove fatal, it was resolved to enlarge the openings and if possible secure the bleeding vessel; and, failing this, to proceed at once to ligature the common femoral artery, this vessel being selected as it was difficult to determine whether the bleeding came from the superficial femoral or branches of the profunda arteries. On June 8th the sinuses were laid freely open and scraped with a Volkmann's spoon. An attempt to find the source of the hæmorrhage proving unsuccessful on account of the sloughy condition of the soft parts round the bone, the common femoral artery was forthwith ligatured, the sinuses being packed as before with iodoform gauze. After this date there was no further hæmorrhage, the circulation in the limb was perfect, the ligature wound healed by primary union, and on Aug. 6th the sinuses had completely closed. A rather troublesome complication was a contracture of the knee, but this was overcome by extension and the use of a splint, and when on Aug. 13th the limb was placed in a plaster-of-Paris bandage it was quite straight. On Aug. 22nd the boy was sent to the convalescent hospital, where he entirely recovered from the effects of the hæmorrhage and put on flesh rapidly.

Remarks by Dr. WILKINSON.—The interest in this case attaches itself not so much to the complete recovery of the bone after the periostitis, but to the success which followed the ligation of the common femoral artery after several severe attacks of secondary hæmorrhage. It will be seen that the patient had four separate attacks—the first on the third day after the initial operation, the second on the twenty-fourth, the third on the twenty-fifth, and the fourth on the twenty-eighth day after the operation, so that there was an interval of three weeks between the first two attacks, during which time the discharge was very slight and serous in character. The source of the bleeding could not be made out satisfactorily, though from its character, which was more a welling up in a continuous stream than a jetting and forcible stream, it resembled bleeding from the distal end of a cut artery. Whether this was so or not cannot be said, for when the femoral was tied the bleeding had stopped, and though the sinuses were explored the tissues were found in such a sloughy condition that nothing definite could be made out as regards its origin. With regard to the cause of the hæmorrhage, one cannot account for it in any other way than as the result of the spread of septic inflammation from the diseased bone to the walls of the bloodvessel, though the drainage was perfect. It certainly cannot have been due to any disease of the vessel wall, and none of the constitutional conditions that predispose to hæmorrhage were present. The case demonstrates the fact that ligation of the artery higher up has its place in the treatment of secondary hæmorrhage, though it is not successful in the majority of cases, as is shown by statistics. It must, however, be admitted that in cases like the above this treatment is worth a trial before

resorting to the more heroic measure of amputation. One other point of interest in the case is the fact that, considering the unhealthy condition of the tissues and the weakened state of the patient, the vitality of the limb was maintained after ligation of the common femoral artery, statistics showing that a common result of this operation is gangrene of the lower extremity, as the ligature is applied above the origin of both the great nutrient arteries of the limb.

GENERAL INFIRMARY, LEEDS.

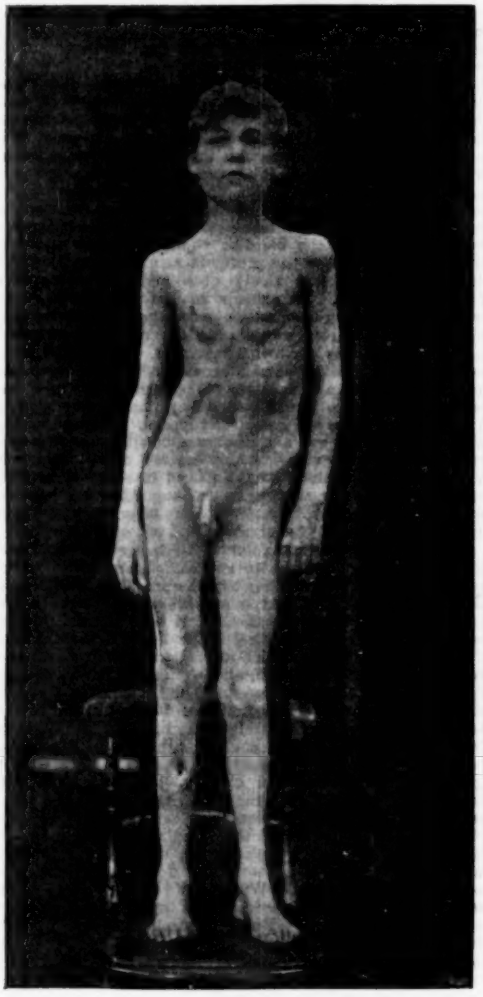
A CASE OF NECROSIS OF THE TIBIA OF EIGHT YEARS' DURATION, WITH LENGTHENING OF THE AFFECTED BONE AND THE FIBULA OF THE SAME SIDE; REMARKS.

(Under the care of Mr. W. H. BROWN.)

THE condition of overgrowth of one of the long bones after necrosis of the shaft is not unusual; for instance, in the Leipzig Clinic, in 28 per cent. of the cases of necrosis of the femur elongation followed. We commonly see it also in the tibia, the bone assuming a bent shape from the want of corresponding growth of the fibula, which acts as a kind of bow-string. The example of altered growth illustrated below is unusual, as the fibula does not appear to have been affected by the inflammatory process. The only explanation that appears quite adequate to account for it is that the vessels of the fibular side of the limb were increased in number, as were those on the tibial side, in consequence of the acute inflammation of the tibia, and that a state of chronic hyperæmia was produced, which resulted in hypertrophy of the bone; but why they became thus affected is not apparent. For the following notes we are indebted to Mr. Douglas Seaton, house surgeon.

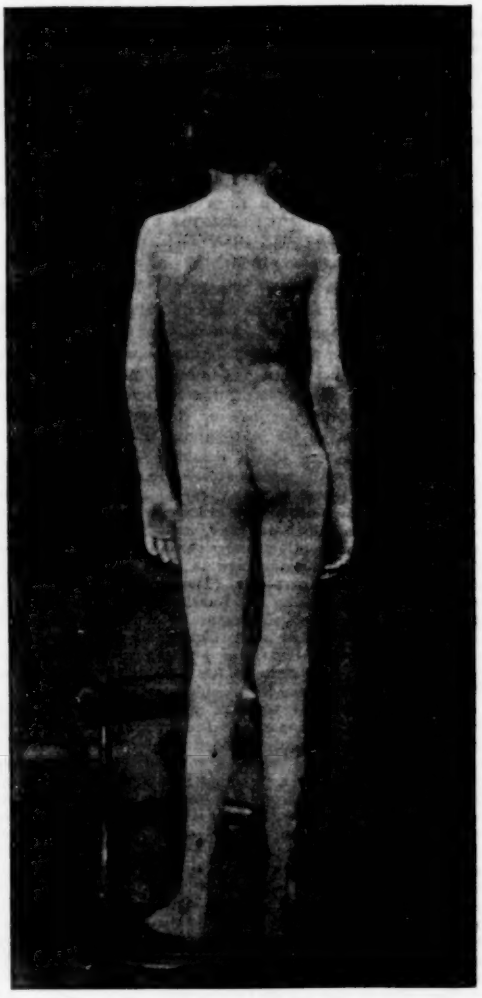
The patient, a boy aged fifteen, was admitted to the General Infirmary, Leeds, on Oct. 25th, 1894. Eight years previously he suddenly awoke one morning suffering from severe pain in his right leg; on attempting to walk he suffered very great pain; he was compelled to remain in bed for six weeks, during which time the leg became considerably swollen. At last the skin gave way, and there was a free discharge of pus. There was no history of any previous illness or of traumatism. Since this time there had been a discharge from the sinus, and on four separate occasions small pieces of dead bone had been

FIG. 1.



View showing position of sinus in tibia and lengthening of right leg.

FIG. 2.



Back view showing lateral spinal curvature.

removed. About four years ago the patient first noticed that the right leg was longer than the left; the difference between the length of the two legs at that time was said to be half an inch. This lengthening had become gradually more marked. He had never suffered from any pain or difficulty in walking since the first illness. At the time of his admission to the infirmary the patient was a healthy, intelligent boy fairly well nourished; he walked with a slight limp, but had no pain at all. The right tibia was thickened throughout the whole extent of the shaft. About the middle there was a sinus through which a sharp piece of necrosed bone half an inch in length protruded. On measuring the right tibia it was found to be two inches longer than the left; the right fibula was lengthened to the same extent. There was no distortion of the ankle-joint. There was a well-marked lateral curvature of the spine, the convexity being to the right above and to the left below. On Oct. 29th, under ether, sequestrotomy was performed, and a piece of necrosed bone two and a half inches long was removed from the interior of the shaft of the tibia. The wound gradually filled up, and the boy was sent home on Nov. 17th with a small superficial wound.

Remarks by Mr. BROWN.—I have not hitherto observed any such condition as described in the foregoing notes. The text-books mention the abnormal growth of bones after long-standing inflammation, but fail to explain, why, as in the present case, a neighbouring healthy bone should undergo a similar increase in length. I have seen several cases where the overgrowth after necrosis has resulted in luxation of the joint of which the affected bone forms a part. If in the case under notice the fibula had not increased equally with the tibia a disabling distortion of the ankle-joint must have resulted. I have not come across any suggestion of treatment to obviate or modify this deformity, which of necessity will be well in progress before it is noticed. Any interference locally would probably aggravate the condition by setting up fresh inflammatory action and hence favouring further growth. The engravings (which are taken from photographs) show the patient's present condition.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Absorption and Metabolism in a Case of Pancreatic Obstruction.—Observations and Experiments on the Pathology of Graves' Disease.—The Relation of Swine Fever to General Ulcerative Colitis.—Imperforate Duodenum.—Actinomycosis of Cheek.—Malignant Reversion of Cystic Fibromata.—Diphtheria and Pseudo-diphtheria Bacilli from two sisters simultaneously affected.—Cultural Variations of Streptococcus Pyogenes.

THE last ordinary meeting of the present session was held on May 21st, the President, Dr. PAVY, being in the chair.

Dr. VAUGHAN HARLEY read a paper on Absorption and Metabolism in Obstruction to the Pancreatic Duct. After first relating the changes which occurred in the absorption of food in animals after partial or total extirpation the pancreas, he proceeded to give the results of analysis in the case of a boy aged thirteen who apparently suffered from pancreatic obstruction due to gastritis following scarlet fever. Through the kindness of Dr. Auld of Wimborne he had the opportunity of making these analyses while the boy was on a fixed diet. In a series of analyses sugar never appeared in the urine, neither did acetone or aceto-acetic acid, so that it was evident that the obstruction of the pancreatic duct had led to no destruction of gland tissue. The bile passages had remained free, as there was neither jaundice nor bile in the urine, and bile products were found in the fæces. The boy was placed for four days on an exclusive diet of milk, all medicines having been stopped. A healthy individual when fed entirely on milk passed per diem with the stools about 1·5 grammes, or 7·7 per cent., of the nitrogen given. In the case of the boy fed on the same diet he passed in his stools 5·25 grammes, or 40 per cent., of the nitrogen given. It was found that dogs passed in their fæces very much the same percentage, so that in a boy with probable pancreatic obstruction absorption of proteids from the intestines was very much hindered. As regarded the fats, while the normal man on milk diet passed about 6·7 grammes—that is to say, 5·6 per cent. of the quantity given—the boy with pancreatic obstruction passed no less than 143·80 grammes per diem—that is to say, 73·05 per cent. of the quantity given. It was thus very apparent that the absorption of both proteids and fat was influenced when the pancreatic juice was hindered from reaching the intestines. Carbohydrates were also somewhat interfered with, as pointed out by Abelmann. As regarded body weight, the boy's weight on ordinary diet was 84 lb., during the second day on milk diet it was 83½ lb., and on the third and fourth days on milk diet it remained 83 lb. On returning to ordinary diet he regained his original weight. In the milk diet he was given no less than 2983·83 calories per diem—that is, 78·9 calories per kilo. When one subtracts from this the quantity of calories which were lost in the stools we find the boy absorbed 1336·8 calories—that is, no less than 36 calories per kilo. It would thus appear that in this case of probable obstruction to the pancreatic duct not only was the absorption of food from the intestines greatly interfered with, but even the food which had been absorbed from the intestines was not properly assimilated. Otherwise we could not explain the fact that a healthy individual when not doing excessive muscular exercise might retain his body weight on about 30 calories per kilo, while this boy, even when he absorbed 36 calories per kilo, was unable to retain his body weight. The diagnosis was confirmed by the fact that when the boy was given raw pancreas the fat in the stools was very greatly diminished. Another interesting point which Dr. Vaughan Harley's analysis brought out was the fact that, both in animals and man, when the pancreatic juice was prevented from reaching the intestines, the fats in their passage along the alimentary canal were nevertheless broken up, not only into free fatty acids and glycerine, but formed soaps—the only difference between the condition in health and that in obstruction to the pancreatic duct apparently being that a slightly increased quantity of soaps was eliminated with the fæces. It would appear from this analysis that although the pancreatic juice was more or less essential for the purpose of absorption of fat from the intestines, it did not owe this power to the "fat splitting-up ferment" of Claude Bernard, and therefore the non-absorption of fat in these cases was as yet unexplained. In conclusion, he gave as a summary the results of analysis in dogs and man. In cases of obstruction of the pancreatic flow the fat absorption in man was diminished to 26·95 per cent., while in the case of dogs with partial removal of the pancreas 4 to 37 per cent. of the fat given was absorbed. Still further, in the case of dogs in which the pancreas had been entirely removed no fats whatsoever were absorbed in the space of seven hours. As regards the proteids, 22 to 53 per cent. of the proteids given were absorbed in dogs; while when the animal had considerably lost flesh only 17 per cent. were absorbed. In the boy's case 60 per cent. of the proteids given were absorbed. Further, the body weight was unable to be kept constant when the individual absorbed the normal quantity of calories.—Dr. HERRINGHAM asked if there was evidence that the pancreatic duct was really obstructed.—Mr. RUSSELL WELLS asked what first directed attention to the fact that the boy was out of health.—Dr. VAUGHAN HARLEY, in reply, said that the symptoms were extreme weakness combined with the passage of most offensive stools, in which free fat floated.

Mr. W. EDMUNDS brought forward some Observations and Experiments on the Pathology of Graves' Disease. He came to the following conclusions. Accessory thyroids were extremely active functionally and were not merely embryonic. The symptoms of Graves' disease were due to some form of nerve disease rather than to a secretion from the diseased thyroid because (*a*) thyroid feeding or thyroid extract would not cause exophthalmos, (*b*) but the eye symptoms could be produced by stimulation of the cervical sympathetic and were therefore certainly of nervous origin. The enlargement of the thyroid could be explained by stimulation of the sympathetic. All the symptoms of Graves' disease could be produced by an artificial lesion of the brain, and all the symptoms, including the enlarged thyroid, could be produced temporarily by mental emotion. It was suggested that in cases in which ulceration of the cornea was threatened the sympathetic in the neck should be divided.

Mr. LEOPOLD HUDSON exhibited a series of Recent Specimens of the Large Intestine of Pigs which were affected with Swine Fever to illustrate the similarity of distribution between these lesions and the condition in the human being which had been described as simple or general ulcerative colitis. The specimens were obtained from the Board of Agriculture, whither they had been sent for the inspection of the Scientific Committee on Swine Fever at present sitting. This committee had been appointed to review the experience gained since the Swine Fever Act of 1893 came into force respecting the etiology, pathology, and morbid anatomy of the diseases classed as swine fever, and to supplement that experience by a series of experiments as to the bacteriology and life-history of these diseases, and as to their communication either directly or indirectly from animal to animal. In regard to this latter point Mr. Hudson raised the question whether this disease was communicable from swine to mankind. In the specimens shown the ulceration was confined to the cæcal aspect of the ileo-cæcal valve and to the large intestine, and every stage could be found, from the small simple ulcer to the large confluent areas of destroyed mucous membrane with adherent masses of necrotic tissue. In the human being the distribution of the ulceration was similar, though the naked-eye appearances were different owing to differences in gland structure in the human and pig's intestine respectively. With regard to clinical symptoms it was shown that in the pig the disease assumed either an acute or a chronic form, the acute disease being accompanied by fever and producing a rapidly fatal result, while in the chronic form the pig at first showed but little signs of illness, the temperature being often subnormal; then later diarrhœa and marasmus occurred. In the human being ulcerative colitis likewise presented either an acute or chronic form. Examples of the acute affection had been recorded in the Transactions of the Society by Dr. Allchin, Dr. Sharkey, and others, the disease being accompanied by fever of an irregular type and by the passage of blood and occasionally of sloughs by the bowel. In the chronic form, on the other hand, the temperature was often subnormal; the main symptoms were the progressive emaciation and diarrhœa. With regard to bacteriology there was already, in the case of the pig, an extensive literature; but in the case of ulcerative colitis in the human being but little had at present been accomplished. It was remarkable that in Dr. Allchin's case the patient herself attributed her illness to the eating of pork; the disease was also frequent in asylums, the patients of which institutions were frequently fed largely on pork. These facts, as well as the similarity between the disease in swine and in mankind both as to morbid anatomy and described clinical symptoms, certainly seemed to justify the prosecution of further inquiries as to their possible intercommunicability.—Dr. KANTHACK remarked that in cases of ulcerative colitis in the human being the lesions had been attributed to the action of the bacillus coli communis.—Dr. ROLLESTON said that the specimens shown did not seem to resemble the cases of ulcerative colitis he had seen in the human subject, in that in the latter large areas of necrosis did not occur, and he thought that in the swine there was not such a tendency to perforation.—Dr. HERRINGHAM said that in some cases in human beings necrosis occurred; for in one of Dr. Tooth's cases sloughs were passed, and the same occurred in one of the cases Dr. Hale White had related.—Dr. HALE WHITE said that the variations between individual cases were so great that it was very difficult to attempt to draw conclusions from the morbid anatomy alone.—Dr. VOELCKER said that in a case of ulcerative colitis which he had examined there were large patches of acute necrosis of the mucous membrane. The ulcers in the swine appeared to him to be more discrete than in the human subject.—Professor COPE, Chief Veterinary Officer to the Board of Agriculture, gave a description of the onset and progress of the disease in swine. He said that in an early case all that would be found were small hyperæmic spots in the mucous membrane of the intestine; after that infiltration took place and a central area of necrosis formed. The ulcers might remain discrete and isolated, but very commonly they became confluent. The disease was extremely fatal to young animals, often before the ulceration had started. Two common pathological varieties of the disease were met with—the ulcerative and the diphtheritic form. Two good instances of the latter variety were shown.—Mr. HUDSON, in reply, remarked that the specimens shown were mostly of the chronic form of the disease; the acute form was now not so commonly met with owing to the regulations in force for the destruction of affected animals and all pigs in contact with them. But the acute form, with its extensive confluent ulceration and with but little adherent slough, resembled very closely the disease as seen in the human subject. Experiments were about to be performed by inoculating and feeding pigs with ulcerative colitis from human beings, with a view to discover if intestinal lesions could be thereby produced. The colon of the pig contained a number of glands precisely like Brunner's glands in the human duodenum, and ulceration and infiltration of these produced the peculiar "button" ulcers of swine fever.

Mr. A. T. COLLUM exhibited a specimen of Imperforate Duodenum.

Mr. H. J. WARING showed a specimen of Actinomycosis of the Cheek. In the majority of cases this rare affection was consequent upon a disease of the upper or lower jaw, usually the latter. The patient was a young, healthy looking man aged twenty years, who came to hospital on account of a swelling of the left cheek. He first noticed the swelling in November, 1894, after which date it gradually increased in size, and in the middle of December it burst into the mouth, a certain amount of purulent fluid being discharged. After this the swelling for the most part disappeared, but in January, 1895, it reappeared, and till he came under observation it gradually increased in size. When seen the patient presented upon the left cheek a hard, irregularly shaped swelling about the size of a half-crown piece. This involved the whole thickness of the cheek, and upon the internal aspect there were several small fluctuating spots where the swelling had broken down. One of these was incised and a small quantity of purulent fluid evacuated. This was collected, and in it were found a number of small oval-shaped bodies which had a whitish colour. These were examined by Dr. Kanthack, who demonstrated the presence of the actinomycotic fungus. The patient was admitted to the hospital and the following operation performed. The reddened area of skin over the swelling was removed by an elliptical incision and the underlying tissues, which were infiltrated by the inflammatory process, were thoroughly scraped away with a Volkmann's spoon. The mucous membrane of the mouth was not divided as the swelling lay over the course of the parotid duct. After this had been done the wound was irrigated, and then packed with iodoform gauze upon which had been spread a layer of iodoform paste. This method of dressing was repeated daily, and at the expiration of three weeks the cheek was quite healed. There were several enlarged submaxillary and parotid lymphatic glands, but these were thought to be due to simple inflammation, and on this account they were not interfered with. The swelling of these glands soon cleared up after the operation. This case was of interest on account of its rarity and also on account of the result of the treatment. It could not be ascertained how the patient had contracted his disease; in all probability the inoculation must have taken place on the inner surface of the cheek; possibly the fungus may have been introduced along with some infected food. The presence of iodoform in the wound appeared to have a considerable influence in arresting the growth or destroying the life of the fungus.

Mr. HERBERT SNOW read a paper on the Malignant Reversion of Mammary Cystic Fibroma. Case 1 (*reversion into carcinoma*).—The patient, aged sixty-four years, had the left breast excised in February, 1887, for a tumour as large as an orange, of several years' duration; there was no gland enlargement. The mass consisted of firm, white fibrous tissue studded with minute acinous dilatations, lined by columnar epithelium; there was nowhere any trace of carcinoma. In March, 1888, there were extensive deposits in the scar, in the corresponding axilla, and in the viscera, which were found post mortem to be infiltrated with typical scirrhous carcinoma. Case 2 (*reversion into true sarcoma*).—In April, 1893, a patient aged forty-two years had her right breast excised for a bossy tumour as large as a child's head, of more than four years' duration. There had been rapid increase for two months; pain had been present only three weeks. There was no gland enlargement. The patient was in robust health. The great bulk of the mass consisted of solid, white fibrous tissue studded with microscopic cysts. Amid this, however, was a small region not larger than a hazel nut, of greyish colour and soft consistence, consisting of embryonic spindle cells in bands (spindle-sarcoma). The disease recurred under the scar

in the following September, this time showing sarcoma tissue only, and again in April, 1894, when the whole parietes in the vicinity were found extensively infiltrated. Text-books confounded the connective-tissue overgrowths appearing during the development of the mamma with those attendant on its devolution or permanent decay. The "fibroma of adolescence" appeared in young girls from fifteen to twenty-five, was hardly ever accompanied by cyst formation, was often multiple, attacking both breasts, was never associated with cancer, except casually, and commonly yielded to suitable local treatment or spontaneously disappeared. On the other hand, the "cystic fibroma" of women past thirty-four was always associated with cysts, formed a single, slowly growing, bulky mass, and eventually passed always into a malignant lesion, sarcoma or carcinoma. The redundant white fibrous tissue failed as age advanced to undergo organisation, and merged into spindle-celled sarcoma; or else the included islets of acinous epithelium developed scirrhous carcinoma of the ordinary type. The point had a significant bearing upon the general question of cancer etiology.

Mr. SHATTOCK gave two short communications, one on Diphtheria and Pseudo-Diphtheria Bacilli from two sisters simultaneously affected, and the other upon Cultural Variations of Streptococcus Pyogenes.

The following card specimens were exhibited:—

Dr. H. M. FLETCHER: Secondary Sarcoma of Lung.

Mr. S. PAGET: Unusual Form of Stricture of Œsophagus.

Mr. W. H. BATTLE: (1) Melanotic Sarcoma of Clitoris; (2) Unusual Effects of Bullet Wound of Vault of Skull; and (3) Diffuse Tuberculous Infiltration of Tibia.

Dr. H. MACKENZIE: (1) Liver with Abnormal Lobes and Multiple Gummata; and (2) Emphysema of Intestine.

Mr. RUSSELL WELLS: Replaced Trephine Circle of Bone.

Dr. CYRIL OGLE: Ulcerative Colitis.

The business of the annual meeting was then proceeded with. The report of the Council showed that the affairs of the society were in a satisfactory state. The introduction of experimental pathological work had stimulated the attendances at the meetings and had brought forth much valuable material. The usual votes of thanks to the retiring officers were carried.

The following is a list of officers for the ensuing year:—President: Henry Trentham Butlin, D.C.L., F.R.C.S. Vice-Presidents: Thomas Barlow, M.D., William Selby Church, M.D., Norman Moore, M.D., Seymour Sharkey, M.D., Alban H. G. Doran, Frederick S. Eve, Cuthbert H. Golding-Bird, and Frederick Treves. Treasurer: Sidney Coupland, M.D. Honorary Secretaries: G. Newton Pitt, M.D., and J. H. Targett, M.S. Council: Wilmot Parker Herringham, M.B., A. A. Kanthack, M.B., Hector Mackenzie, M.D., Sidney Martin, M.D., William Pasteur, M.D., H. D. Rolleston, M.D., Charles Scott Sherrington, M.B., F. Charlewood Turner, M.D., A. F. Voelcker, M.D., Dawson Williams, M.D., Gilbert Barling, M.B., Jones Berry, M.B., Stanley Boyd, Anthony Bowlby, E. Hurry Fenwick, C. B. Lockwood, Stephen Paget, Bilton Pollard, M.B., Samuel G. Shattock, and Charles Stonham.

HUNTERIAN SOCIETY.

The Necessity for a Central Organisation in the Medical Profession.

A MEETING of this society was held on April 24th at the London Institution, Mr. CHARTERS J. SYMONDS, President, being in the chair.

Mr. F. R. HUMPHREYS read a paper on the Necessity for a Central Organisation in the Medical Profession, illustrating his arguments by facts derived from the experience of himself and others, so as to show the necessity for speedily meeting the evils described. The lay medical aid associations were first attacked, and reference was made to the resolution of the General Medical Council, which had appointed a committee to consider the question and had come to the conclusion that these associations overworked their officers and underpaid them. It was unfortunately the case that some men would not allow any mere ethical questions to prevent their acquiring practices at the expense of their neighbours. Lay companies must be fought with capital if they were to be beaten. Provident dispensaries appeared to have been established early in the century, and not only now were the rates for members too low, being at the highest 7½*d.* for a visit or consultation, but a great part of the money was expended on unnecessary premises and officers. Mr. Humphreys gave a few instances of payments at various provident dispensaries, including Tunbridge Wells, Reading, Leamington, and Salisbury, showing the latter to be the only one which attempted to pay the medical men properly. In the case of sick clubs, which were provident societies without wage limit, the club officer received usually from 3*s.* 6*d.* to 5*s.* per head per annum, but in the country these clubs rarely paid their medical men more than 4*s.* per head per annum, a sum which could not be remunerative, but which would be accepted in order to avoid competition. It was simply impossible for a dispensary practitioner to comply with the requirements of medical practice while charging such fees. He must be dishonest in some direction in order to make enough to live upon; and inferior and insufficient drugs, unqualified assistants, card advertising, &c. were a few of the common evils attached to "cheap dispensaries." The only way to avert these evils lay in a properly worked provident system, under which charges, fair alike to medical men and patients, were made. The present condition of things would not be long tolerated if thoroughly exposed through the medium of a representative committee under the Royal Colleges taking evidence like a House of Commons select committee, as already proposed by Mr. Bryant. It was estimated that in London one in every two persons received charitable medical relief at the out-patient departments of hospitals, and from figures given by Dr. Rentoul it would appear that 50 per cent. were unsuitable cases. Mr. Humphreys then read part of a letter from a medical man who had acted as locum tenens last July at a public dispensary, where he had to see 210 patients in three hours, a hundred more applicants being dismissed with "repeat" medicines. Many of the cases were utterly unsuitable, and some came from Gravesend and other equally distant places to be treated with medicine for a week for sixpence. Another evil connected with hospitals was the pay ward. If a medical man could send his patients to the pay wards of a hospital and attend them there it would not matter, but when once they were within the hospital walls they were practically lost to the outsider. A further danger threatened in the shape of nursing homes where patients were either attended by no medical man at all or by one specially appointed to the institution. No medical man should patronise these nursing homes unless the patients were under medical advice. Another important question was that of the relations between consultants and general practitioners. The junior consultants had very inadequate remuneration, but if the leading physicians would take fees corresponding to their position the difficulties would be less. Much might be done if those practitioners who were willing to act as pure consultants were to state this fact in some binding way. The term "infamous conduct" had been much objected to as meaning one thing to the profession and another to the outside public. Mr. Humphreys had written to Sir Richard Quain asking him if the General Medical Council would be likely to approve of an organisation to promote discipline in the profession. Sir Richard Quain replied that he was confident that the Council would keep within its statutory authority, which does not enable it to interfere in the internal discipline of the profession; and in another letter he said that it would be quite impossible for the Council to strain its powers in that direction. Under these circumstances what controlling influence could be devised? Mr. Humphreys himself proposed a union of medical associations, whose delegates should form local boards, and these in turn appoint directors.

The CHAIRMAN then asked for opinions on the best way of meeting the evils complained of, whether by means of purely moral and ethical influences or by the establishment of an ethical association to which every man would belong, non-membership marking him as not respectable. It had been suggested that the best remedy for the special evils attending provident societies was that all the medical men in a particular district should combine together to form a provident society of their own, the fees being used for the payment of the members.

Mr. BRYANT said that the diseases of the body corporate needed attending to just as much as the diseases of the body corporal. Most of the faults that existed in the profession arose through competition; but what power had the General Medical Council to influence those who undersell? It was not only in the lower grades of the profession

that this under-bidding went on, but in the higher grades as well. Five years ago the Government was asked by the Royal College of Surgeons of England for further powers, but it would not grant them. It had been again approached on the subject and a series of by-laws put before the Home Secretary. Since the question was put before the Home Secretary an association had arisen speaking in the name of the Members of the Royal College of Surgeons of England and asking the Home Secretary not to grant the desired powers. The only mode of punishment was by removing the names from the list of Members of the College, but that seemed to be too severe. It was easy to take a diploma away, but not so easy to restore it.

Dr. GLOVER said that he was disposed to agree with Mr. Bryant that the powers of the General Medical Council were too limited to permit of its doing anything. He did not think that any attempt to interfere with the practice of medical men would have the support of the Council. It had been already tried and the Council declined to pass any judgment upon the conduct of the men. The medical corporations might do more than they did, the power of the General Medical Council being reserved for extreme cases. The medical corporations would condemn what seemed to be a contempt for their authority. They would take the name of a medical man off their list and they would deprive him of his diploma, but the man from whom the diploma was withdrawn would use his title, and continue to do so, without the slightest sign from the corporation which had withdrawn the diploma. Could anything be more obvious than that it was the duty of the body whose rules had been defied to bring that man to court? In every locality there should be an association of medical men to bring pressure to bear upon those who did these things.

Dr. ALDERSON said that the out-patient departments of hospitals had done a grievous wrong to the general practitioner. He wished to support the proposition made by Colonel Montefiore as to the desirability of a Central Board. Such a board would prevent the starting of unnecessary special hospitals merely for the benefit of one medical man. As to the sick club system, the General Medical Council could not do much, but some improvement might be expected to result from higher education. He agreed with Dr. Glover that the profession must not be made into a trade, and approved of the suggestion that medical men should not be allowed to dispense their own medicines.

Mr. COTMAN said he was under the impression that the General Medical Council was competent to declare what was infamous in a professional respect. Without combination nothing could be done, and medical men should combine in the various districts in which they live.

Dr. CAMPBELL POPE thought that the General Medical Council would greatly help if they could define some degree of misconduct less strong than that which was termed "infamous." Being struck off the Register was a very serious thing, and if something less severe could be arranged it would have great effect. The Council should also notify to the registrars the names of those who had been struck off the Register. The practices which came before the society were canvassing patients for clubs and sending out advertisements, and such cases should be reported to the corporations from which the offenders received their diplomas. Many patients with good incomes were going daily to various hospitals, and the special hospitals were patronised by a better class than the general ones, as had, in fact, been pointed out by the managers of special hospitals themselves. There was a certain flavour of charity connected with the general hospitals, and people did not like to say they had been to Guy's or St. Bartholomew's or University College Hospital, but they did not object to say that they had obtained advice at the Hospital for Paralysis or for Diseases of the Eye or the Skin. Moreover, there was only one University which could remove a member for misconduct, and many men who had been deprived of their diploma still flourished their University degree in the face of the General Medical Council. As Mr. Bryant had remarked, the reform must come from the conscience of the man.

Mr. SMALLPEICE said that the corporations and colleges might influence erring members by censuring them without removing them. What was wanted was an ethical association in some form which should be regarded as authoritative.

Dr. CAGNEY said that he did not believe that any medical council would have the power to deal with this question. Medical men did not require looking after more than any other body of men, and conscientious medical students would do all that was required to raise the condition of the profession.

Mr. HUMPHREYS, in reply, said that those men who charged unremunerative fees were degrading the whole profession, and some protection against them must be found. Medical etiquette had no weight at all with such men.

EPIDEMIOLOGICAL SOCIETY OF LONDON.

The Relations between the Conditions of the Soil and the Prevalence of Epidemic and Endemic Diseases.

THE last meeting of the session of this society was held on May 17th, Mr. SHIRLEY F. MURPHY, President, being in the chair.

Brigade-Surgeon-Lieutenant-Colonel LANE NOTTER, M.D., Professor of Military Hygiene at Netley, read a paper on the Relations between the Conditions of the Soil and the Prevalence of Epidemic and Endemic Diseases. Some such influence had, he said, been recognised from the time of Hippocrates, but the scientific study of the geographical distribution and seasonal prevalence of diseases was of quite recent growth. Pettenkofer, von Fodor, Hirsch, Fleck, Schlössing and Müntz, Lewis and Cunningham, and others had taken up different aspects of the question; but while many of the phenomena of disease were clearly referable to telluric conditions, the fact that these conditions were for the most part processes in which numerous factors were involved, some coöperating and others mutually antagonistic, rendered their investigation difficult even for limited areas. We might consider the complex result and the effects of the several factors, but again our knowledge even of these was imperfect—e.g., as regards the organic acids and other bodies which, together with salts, water, air, and carbonic dioxide, went to make up the food of plants. Among the diseases which were evidently influenced by soil conditions were cholera, diphtheria, enteric fever, diarrhœa, malarial fevers, phthisis, rheumatism, yellow fever, dysentery, and a few others. *Cholera.*—Its importation was a necessary condition, save in regions where it was constantly present, but there were localities, as Pettenkofer had pointed out, where it always assumed a severe type, and others the sanitary conditions of which were no better where it never established itself. The bacillus was easily identified, though it was not certain whether the coöperation of others was not required for the production of the full effects. In this country drinking water was, at any rate for many years past, the chief or sole vehicle of infection, but in Germany the ground water was held to exert a powerful influence, Pettenkofer maintaining that cholera never prevailed where the level of the ground water was fixed and constant, or in absolutely impervious soils, where, in fact, there was none, since by the rise and fall of the ground water wells became infected, and, as Pfeiffer argued, the movements of the ground water were the index to the moisture, aeration, and temperature of the surface soil, the home of all bacteria. Aridity, or prolonged drought, and very heavy rainfall or submergence were alike unfavourable to the spread of cholera, severe epidemics occurring in India only during light, warm rains in arid regions, such as the Punjab, and in the comparatively dry intervals following the rains in humid Bengal, though other causes, as human intercourse and habits, were concerned in its diffusion. Its favourite haunts were sandy soils alongside large rivers or in the proximity of tanks, but the bacillus or vibrio, though often found in tanks or filters, had not yet been detected in the soil. Feeble as they were, they had been observed to multiply in moist, warm soil for forty days, and in a mixture of soil and sterilised fæces for twenty-eight, though in the presence of crude fæces they perished within a week. *Diphtheria*, though propagated mainly by personal intercourse, recurred year after year in the same places, as if connected with the soil, and it seemed to prefer clays, but probably the nature of the soil mattered little so long as it was cold and damp. In moist earth, at a temperature not over 14°C. and in the dark, cultures could be maintained for four months; but warmth, dryness and light were fatal to them in a short time. Adams had sought to show a relation between outbreaks of diphtheria and the movements of the ground water, but we knew too little of these in this country, and other factors were so powerful that

there was no evidence in support of this view. The influence of temperature and moisture fully explained its absence from the plains of India and its prevalence in the hill stations with their more European climate. *Enteric fever* was universally distributed, but outbreaks were always strictly local. Nowhere did elevation have any real influence, but it was more frequent on recent formations, these being the more permeable. Ranke at Munich and Cameron in Dublin observed its prevalence on pervious, sewage-sodden soils, the agency of drinking water being excluded, and the movements of the ground water and ground air, especially a rapid fall as Pettenkofer maintained, the only possible exciting cause. The presence of the bacillus in the soil had not been demonstrated, but experiments had shown that it lived longer in moist soil than in dry, and in garden earth than in pure sand, while it died out very soon in peat. The experimental evidence of dried enteric excreta being conveyed as dust had a direct bearing on a possible danger from the use of earth closets, especially in India. *Diarrhœa*, as occurring in summer and autumn, was evidently dependent on the presence of putrefying organic matter, not necessarily fæcal, and on permeability of the soil, being rare on slates and granite, and not specially prevalent on clays. Ballard first called attention to the influence of high temperature of the soil, not of the air alone, the mortality rising when the temperature of the earth at a depth of four feet reached 66° F., and declining a week after it had sunk to 60° F. No specific bacillus had been shown, but the putrescence of foods, especially milk, was a most important factor in its causation. *Malarial fevers*, depending on the presence of organic matter under certain conditions in the soil, were greatly influenced by the movements of the ground water and ground air, which was aspirated by the reduced pressure of an atmosphere warm and laden with moisture, as in some tropical regions and in all warm and temperate climates in summer and autumn nights, or escaped when the soil was turned up. The poison was air-borne and not carried by dust, desiccation and submergence alike arresting its diffusion, though it would be taken in by drinking the water of malarial districts. The microbe was most probably protozoic, an amœba, the plasmodium of Laveran, the "spores" of which stored in the spleen sent out successive broods of the organism. It had, however, not been observed or cultivated out of the body. *Phthisis.*—The observations of Middleton, Buchanan, and Bowditch on the relation between the prevalence of phthisis and dampness of soil and the decline in the mortality that followed the better drainage of certain towns were well known, but had been severely criticised. Kelly had shown that phthisis preferred cold, damp, bleak localities whatever the soil, and it was frequent enough among persons in ill-ventilated, overcrowded rooms. In fact, whatever conditions excited catarrhs of the respiratory organs predisposed to phthisis, catarrhs constituting the non-tuberculous forms and inducing susceptibility to tuberculous infection. Improved social conditions of the town populations should be considered. *Rheumatism.*—There was really little or nothing in common to the two diseases called acute and chronic rheumatism, names which were relics of obsolete doctrines. Chronic rheumatism was set up by exposure to cold and damp. Acute rheumatism seemed to prefer a warm, dry soil, and to assume an epidemic character in years of small rainfall and low ground water. The tendency of recent thought was to look on it as a soil-bred bacterial disease in some respects akin to erysipelas. *Yellow fever* was confined to the banks of rivers and seaports in the tropical zone of the Atlantic, where the polluted mud was alternately flooded and dried, and the foreshores had not been covered by shingle or docks and quays. Creighton's theory of its evolution from the filthy bilge-water of the slave ships, saturated with the excreta of dysentery-and typhus-stricken negroes, had much in its favour. The microbe, undoubtedly propagated in the mud, had not been certainly isolated.

Dr. SALTET (medical officer of health of Amsterdam) said that agues, so prevalent in Holland forty years ago, had become rare since the substitution of steam pumping engines for windmills rendered it possible to keep the ground water at a constant level.

Dr. NEWSHOLME (medical officer of health of Brighton) regretted that owing to the neglect of Pettenkofer's teaching there were in this country no regularly recorded observations of the movements of the ground water, except in Brighton and Croydon, such as were taken daily at sixteen stations around Berlin. Under present conditions it would seem that an impervious soil was likely to be more healthy than a pervious one. In comparing the frequency of epidemics on different soils the numbers of the population living on each should be taken into account. It was instructive to contrast phthisis and diphtheria, in which the same factors of soil &c. and personal intercourse were concerned, but inversely; so that while it was not easy to prove infection in phthisis, the influence of soil was totally obscured in diphtheria; and while the former had decreased under improved social conditions the latter had, at certain ages at any rate—viz., those of school life—increased.

BRITISH GYNÆCOLOGICAL SOCIETY.

Pregnancy complicated by Suppuration within the Pelvis.—Exhibition of Specimens.—Intra-uterine Stems.

A MEETING of this society was held on May 9th, Dr. CLEMENT GODSON, the President, being in the chair.

Dr. H. MICHIE (Nottingham) read a paper on Pregnancy complicated by Suppuration within the Pelvis. He said that his attention had been called to this subject by a paper read before the society in February, 1891, by Dr. Grigg, on the Influence of Pre-existing Inflammatory Disease on the Puerperium. He thought that the vague expression "puerperal fever" should be given up, just as the term "surgical fever" had been discarded; he believed that the two diseases were due to similar, if not identical, causes. He related six illustrative cases, which fell naturally into three groups—viz., (1) perforation of the vermiform appendix, giving rise to abscess within the pelvis; (2) suppurative peritonitis due probably to pre-existing disease of the uterine appendages and operated upon after delivery; and (3) suppuration of the appendages operated upon during pregnancy. Group 1 was represented by one case, a patient in the fourth month of pregnancy whose symptoms and physical signs pointed to disease of the appendix. Abdominal section was performed, when the ruptured appendix and an escaped concretion were removed. Recovery was uneventful and natural delivery occurred at term. Had the complication arisen at or near the time of delivery it might have been overlooked, and the practitioner might have been accused of neglecting the use of proper antiseptic precautions. Group 2 contained two cases. The first of these patients was seized five days before labour with acute abdominal pain, the symptoms subsiding with rest, but being aggravated by the delivery. She rallied slowly till the sixth day after labour and then became rapidly worse. She was operated upon without delay, and about three pints of thin offensive fluid were evacuated from the abdominal cavity. The Fallopian tubes, which contained pus, and the ovaries, which were gangrenous-looking and studded with small abscesses, were removed and drainage used. Recovery was slow but uninterrupted. The second case of this group was very similar. The patient miscarried in the sixth month of her first pregnancy after having had a profuse yellow vaginal discharge for six weeks. The appendages in this case did not seem so much diseased and were not removed. The patient's recovery was satisfactory and she was now seven months advanced in her second pregnancy. These two cases were, in fact, instances of puerperal peritonitis commencing before delivery. In the second case there was a definite history of gonorrhœa. Group 3 consisted of three cases. The first patient was seized with severe pain during the fourth month of pregnancy. The uterus was retroverted. Abdominal section was performed and both Fallopian tubes were removed. The left one contained pus; the right one was thickened and inflamed, but not otherwise diseased. The patient recovered rapidly; pregnancy proceeded to term and the labour was natural. The second case was a multipara aged forty years, from four to five months pregnant and suffering from gonorrhœa and peritonitis. Immediate operation was advised, but the patient delayed it for four days, at the end of which her pulse had risen from 98 to 128 and all the symptoms had become worse. The pelvis contained about half a pint of sero-purulent fluid and there was double pyosalpinx. The appendages on both sides were removed and a rubber drainage-tube was inserted. She went on well for two days and then miscarried; soon afterwards all the symptoms of

acute septic peritonitis set in and death ensued on the sixth day. The last case was a married woman aged twenty-two years, the mother of two children. She ceased to menstruate in May, 1892; in August she had at irregular intervals labour pains, with discharge of blood from the vagina. When seen in October the abdomen contained two tumours. One, on the right side, was fixed, smooth in outline, reaching to the umbilicus, and almost filling the pelvis; in the pelvic part fluctuation was felt. The other tumour, on the left side, was movable, uniform and smooth, and reached nearly to the costal cartilages. The os uteri was close behind the pubes and was dilated to the size of a florin; a fœtal head was presenting, the membranes being unruptured. The next day labour pains came on strongly, blood-clots were passed, the patient suffered from rigors and vomiting, her pulse rose to 136, and her temperature to 103·6° F. On the following day, her condition being critical, the abdomen was opened and a cyst of the right ovary universally adherent and containing fetid pus was removed. The operation occupied fifteen minutes and labour was completed four hours afterwards. In the evening there was much distension and a glass drainage-tube was introduced. There was gradual improvement till the sixth day, when distension having returned the drainage-tube was reintroduced and a quantity of sero-purulent fluid was withdrawn. Three days later the tube was finally removed and recovery proceeded without interruption. Thirty-three days after the operation the patient was discharged recovered. In March, 1894, she returned and was found to have a small ovarian cyst on the left side. This was removed and it was observed that all the previous adhesions had disappeared. She went home fourteen days after the operation. Although in the great majority of instances puerperal peritonitis arises from septic material introduced during or soon after labour, these cases show that occasionally it might originate in pre-existing inflammatory conditions, and might be altogether independent of immediate infection from without.—The PRESIDENT regarded Dr. Michie's paper as one of special value. He had seen a case at St. Bartholomew's Hospital very like the first one related. The patient suffered from fever, pain, and vomiting, and peritonitis was diagnosed. In twenty-four hours labour came on and death ensued. At the necropsy a ruptured vermiform appendix was found. In another instance a patient died during pregnancy, probably from a ruptured pyosalpinx. Operation was advised, but was not allowed. Dr. Michie's paper would help to exonerate men who were in some cases unfairly accused of having conveyed infection to their patients.—Dr. LEITH NAPIER, Dr. ROUTH, and Dr. KEMPSTER joined in the discussion, and Dr. MICHIE briefly replied.

Mr. JESSETT showed two specimens: 1. A Large Fibroid of the Uterus, the whole organ having been removed by Abdominal Hysterectomy. The patient's mother had been operated on by Mr. Jessett eight years previously for uterine fibroid. Trendelenburg's position was used. A long, specially made speculum was passed high into the vagina. Peritoneal flaps were reflected from the tumour and the speculum was cut down upon. The uterine arteries were tied, the broad ligaments cut through, and the whole organ lifted out. Ligatures were passed through the peritoneal flaps, without tying, and their ends, left long, were drawn down through the vagina. The patient was making an uneventful convalescence. This was his fifth case treated by this method. 2. A Case of Hæmatosalpinx. Blood was found in both tubes; one of them ruptured during operation, allowing old dark blood-clots to pass into the pelvis. The patient made a good recovery.

Dr. HEYWOOD SMITH showed two specimens: 1. Migrating Ovarian Dermoid. The uterus in this case was retroflexed in such a way that when replaced in its normal position it fell back with a jerk. The tumour was to the right of the uterus, but was found to belong to the left side. The left Fallopian tube passed in front of the uterus, so as to hold it in a backward position. The ovary and tube of the right side were deep in the pelvis and atrophied. The patient made a good recovery. 2. Sarcoma of the Uterus removed by Vaginal Hysterectomy. Before operation a fragment of the growth was examined by a pathologist, who reported it to be sarcomatous. Owing to the difficulty of applying ligatures in this case the broad ligaments were secured with Braithwaite's clamp forceps. The patient was progressing satisfactorily.

Dr. MACNAUGHTON JONES showed for Dr. DUKE some Intra-uterine Stems, as well as one of his own. He never himself used them except after division of the cervix for stenosis and dysmenorrhœa. Much of the harm caused by stems was due to their being too long.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

Multiple Diabetic Neuritis.—Skin Grafting from the Lower Animals.—Exhibition of Cases, Specimens, and Drawings.

THE tenth meeting of this society was held on May 15th, Dr. CLOUSTON, President, being in the chair.

Professor T. R. FRASER read a paper on a case of Multiple Diabetic Neuritis. The patient, a man, thirty-two years of age, sought admission to the Glasgow Royal Infirmary on account of general weakness, and was found to be suffering from diabetes. He had previously undergone severe anxiety through the prolonged illness of his wife. He improved under treatment and was able to return to work, but after some time he relapsed and was taken into the Edinburgh Royal Infirmary. On admission, being on ordinary diet, the urine contained on an average 7178 grains of glucose in twenty-four hours, but with restricted diet the amount was 3622 grains in the same period. While he was taking pancreatin the average excretion of glucose fell to 1716 grains in twenty-four hours. From the time of admission there was pain in the calves and ankles, which had persisted for three months. He felt neither numbness nor abnormal sensations. The sensations to heat and cold in the limbs were normal. There was marked pain on pressure in the legs, pectoral muscles, and biceps. The knee-jerks were absent. The gait was normal. Vision was diminished; a central scotoma for red was present in both eyes. Notwithstanding the diminished excretion of sugar the patient's general condition deteriorated, and the chloroform-like odour, which had been present from the time of admission, became more marked. Dyspnœa, orthopnœa, and coma ensued, and were followed by death. Post mortem phthisis was discovered, but no other gross lesion. The disease was probably a toxic neuritis caused by a poison derived from the sugar.—Dr. ALEXANDER BRUCE gave an account of the post-mortem examination. The optic nerves, specimens of which were stained by the Weigert-Pal and Marchi methods, were much degenerated in the centre. The right posterior tibial nerve was undergoing parenchymatous neuritis, and the corresponding nerve on the left side showed a like degeneration, but in a less degree. The gastrocnemii muscles, stained by Marchi's method, showed between the muscle columns little rows of black dots in the binding substance resulting from fatty degeneration. The muscle striation seemed practically normal.—Dr. JAMES said that he had two recent cases of neuritis in his wards, one in a patient suffering from diabetes and the other in a case of advanced phthisis. The concurrence of neuritis with tuberculosis was incompatible with any toxic theory with regard to sugar.—Dr. G. A. GIBSON said that multiple neuritis occurring in diabetes seemed to be independent of the amount of sugar present. There is an analogy between alcoholic poisoning and the condition now under discussion, and there must be some form of toxæmia that causes the neuritis. He advanced the view that rigid diet was sometimes inadvisable, tending to increase the acidity of the blood, whereby fermentative processes were set up in which acetone was the last development.—The PRESIDENT said that these histological changes might be compared with certain cortical changes found in diabetic insanity. In one such case Dr. Clark had found decided changes in the nerve cells of the cortex. Diabetic coma and congestive effects, no doubt arising in the vaso-motor centres of the cortex, might be accounted for on the toxic theory. The boils which sometimes occur might be connected with toxic changes in the nerves of the skin.—Professor FRASER then replied.

Mr. ALEXANDER MILES read notes on Skin Grafting from the Lower Animals. Of the different methods of skin grafting Thiersch's gave the best results, but it had the disadvantage of necessitating the use of chloroform. There was also the difficulty of obtaining skin. The lower animals, however, were always available. In his cases dogs, rabbits, cats, and frogs had been employed, and dogs had been found the most satisfactory. Young animals were used, their skin

being preferable. The ulcer was prepared as for any grafting. Scraping was not necessary; in fact, it was to be deprecated. The animal having been killed, the abdomen and flanks were shaved and purified, and the skin was dissected up and floated out in warm boracic lotion. The size of the graft varied up to six inches by one inch. The graft was placed on the ulcer and pressed down; the ulcer was covered as completely as possible and a dressing applied. Success depended on the subsequent dressing. The first dressing should not be done until at least forty-eight hours had elapsed, and should be delayed longer if possible; the greatest care must be taken to avoid disturbing the grafts. Complications might arise, such as sloughing of the graft (possibly caused by too early dressing), hæmorrhage under the graft, &c. The situation of the ulcer might require modification of the treatment. On the thorax the bandage should be very loose so that the grafts might move with the chest wall. Ten cases were quoted, in four of which the results had been eminently satisfactory. In two of them amputation—which had been recommended and for which the patients were anxious—was avoided. Four cases were partially successful and two were failures. After grafting, the scars were stronger than ordinary cicatrices, and no hair, pigment, or sweat glands were present in them.—Mr. JOSEPH BELL said that he had a good deal of experience some years ago with Reverdain's method of skin grafting. He had almost exclusively used tame white rats, the young of which supplied an excellent plastic skin. It was of importance not to take the subcutaneous fat in removing the skin. The grafts were put on granulation tissue. He never scraped if he could help it, and agreed with the recommendation that there should be no dressing before forty-eight hours. In dressing, the difficulty was to make the grafts adhere in mobile parts such as the thorax. He used small pieces of protective a quarter of an inch square, applied in large numbers one above another like the scales of an armadillo, the idea being that in movement the pads of protective moved on each other, and so did not disturb the grafts. Long ago David Hamilton suggested sponge grafting. The results were most extraordinary, the sponge seeming to act as a matrix or support for the granulations. He mentioned a case where a large mass of sponge placed in the axilla became embedded in granulations.—Mr. A. G. MILLER said that whatever resulted from skin grafting was not true skin, but cicatrix. Some grafts did more good than others, skin being the best. Sponge grafting was mainly useful for the protection of granulations; it also helped cicatrisation, but not so well as skin grafting.—Mr. CATHCART thought the advantage of Mr. Miles's method over Thiersch's was, as had been said, the absence of the necessity for giving chloroform. The results also were as good. Young pigs might be useful as a source of grafts, but they were expensive.—Mr. WALLACE said it was quite intelligible that no hair or sweat glands should be present, for in making the Thiersch graft they did not cut deep enough to take glands but only the tips of the papillæ, just enough to draw blood. Personally he leant to Thiersch's method rather than to grafting from the lower animals. They could, as a rule, get the patient to consent to the administration of an anæsthetic, and could take large portions of skin from the front of the thigh.—Mr. MILES then replied.

The PRESIDENT showed a patient who had recovered from Insanity under treatment with Thyroid Extract, administered in large doses till what might be termed a septic thyroid fever was set up. After from three to six days the extract was discontinued and the patient was nursed in bed. The effect on nutrition in successful cases was well marked. The thyroid extract seemed to stimulate the trophic centres and the patient gained weight rapidly.

Mr. CATHCART showed two male patients with Venereal Warts. The cases exemplified the fact that venereal warts might be acquired without any irritation from gonorrhœal discharge, neither of the patients having had gonorrhœa.

Dr. ALEXANDER BRUCE showed specimens of the Embryo Filaria Medinensis. The embryos were exhibited free and also in the host, the minute freshwater cyclops.

Dr. G. A. GIBSON showed: (1) Drawings of a Brain from a case of Porencephaly, and from a case of Thrombosis of the Lateral Sinuses and Cerebral Veins in which there was red softening of the internal capsule; and (2) Photographs from a patient suffering from Double Facial Paralysis, and from a patient suffering from Alternate Paralysis from a Lesion of the Crus Cerebri.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Excision of the Rectum.

A MEETING of this Section was held on April 26th, the President, Mr. W. THORNLEY STOKER, being in the chair.

Mr. HEUSTON read a paper on Excision of the Rectum in Malignant Disease implicating the Middle Third of the Bowel, advocating a modification of the old perineal operation in such cases. He gave the history of two cases in which he had operated, the first being that of a man aged fifty-nine years who had an ulcerated growth implicating the anterior aspect of the bowel to the extent of three inches from immediately above the internal sphincter, and intimately attached to the prostate gland; this, on microscopic examination, was shown to be cylindrical epithelioma. The patient was sent home three weeks after operation with full and natural control over his bowel. Three and a half years have elapsed since the operation, and there has been no evidence of recurrence of the disease. The second case was that of a woman aged fifty-one years who had an ulcerated growth situated on the posterior wall of the bowel, the lower border of which was between two and three inches from the anus, from which it extended upwards for about two and a half inches, being attached to the anterior aspect of the sacrum. This patient was allowed to go home thirty-one days after operation, having perfect control over her bowel. Nearly three years have elapsed since the operation, and no further evidence of disease has appeared. The operation performed was as follows. An incision is made from the rectum to the coccyx, severing the attachment of the external sphincter and levator ani muscles from the ano-coccygeal ligament; the rectum is then separated from the tissues, and clip forceps are applied at the commencement of the ampulla, below which the bowel is divided in its entire circumference and then drawn down and the diseased portion removed. The upper portion of the bowel is fixed in its position by a row of sutures about an inch above its cut extremity to the pelvic fascia and levator ani muscle; these sutures should not penetrate the mucous coat of the bowel; the object of the first row of sutures is to prevent tension on a second row, uniting the cut extremity of the bowel to the portion of the intestine with the sphincters and levator ani originally left below the section of the bowel. Mr. Heuston claimed for the operation that it is a less serious one than any of those requiring removal or displacement of the coccyx and part of the sacrum, that the peritoneal cavity is not usually opened, the normal function of the bowel is preserved, subsequent stricture is not so liable as after the usual perineal operation, convalescence is rapid, the mortality low, and the disease is not more liable to recur than after the more extensive operations.

The PRESIDENT said that within the last few years the treatment of cancer of the rectum had attained a very satisfactory development. He entirely disagreed with Mr. Heuston regarding the removal of cancer of the rectum by the perineal as compared with the trans-sacral operation. He had at present two patients in the Richmond Hospital, both of whom he could not have ventured to touch by the perineal method. He did not dread the opening of the peritoneum. Cancer of the middle third of the rectum could not be removed by the perineal operation without opening the peritoneum—if, as Mr. Heuston stated, the peritoneum often came down to within one inch and a half to two inches of the sphincter. It was better to open the peritoneum by an operation which gives a perfect view, such as the trans-sacral method does. Personally he preferred the lateral semiprone position to having the patient placed on his back.

Mr. BALL said Mr. Heuston's paper had raised what the President had described as a test between the perineal and trans-sacral excision of the rectum. He did not think there was any doubt that both of these operations had their right place. The perineal excision of cancer must be kept for a very small minority of cases in which the disease is very close to the anus. The so-called trans-sacral operation need not necessarily be a trans-sacral one when the cancer was low down. Quite sufficient room could be obtained by dividing the coccyx from the sacrum without cutting the sacrum at all. The additional room gained by removing the sacrum is

very great indeed. Only a day ago he had seen a woman in whom he had divided the sacrum transsacrally two years previously. At the time he was quite unable to estimate the extent of the disease. In this case he had to remove nearly the whole of the rectum and, perhaps, part of the sigmoid flexure—in all, six inches. He had then to divide the mesentery of the rectum or sigmoid flexure to some extent, so as to be able to bring down the intestine sufficiently to stitch it to the intestine and anus left in the floor of the pelvis. It was an ideal result, there being complete and absolute union between the upper and lower parts of the intestine. The floor was not disturbed. The operation had been conducted above the levatores ani. He did not quite follow Mr. Heuston's description of the operation he performed. Did the incision from the anus to the coccyx involve the anus or start outside it? If it did not involve the anus it was the operation selected by everybody in suitable cases. The coccyx could be excised, or the sacrum up to the third sacral foramen. Above this foramen the bladder would be paralysed.

Mr. CROLY said that Mr. Heuston stated some of his patients suffered from intense pain. His experience of cancer of the rectum was that it was constantly overlooked till it had progressed too far. If he could not get his finger above the diseased part he either left the case alone or performed a colotomy. He thought whether the lymphatic glands were implicated or not was a very important point. He would like to know the condition of the patient in a few months.

The PRESIDENT said that in one of his cases he found considerable implication of the lymphatic glands, and that he readily removed them as high as the brim of the true pelvis. The trans-sacral operation gave great opportunity for examining the pelvis.

Mr. FRANKS said that in a case of cancer of the rectum high up he would prefer a trans-sacral operation. Of all situations in the body, with the exception of the lower lip, cancer of the rectum offers the best hopes of non-recurrence. The disease usually lasts a considerable time before it invades the glands. Mr. Heuston's case was one in point. In a woman whom he had operated on the disease involved the anus and extended up three inches. He removed the whole anus, and brought down the bowel and sutured it to the skin. He saw her nine years after the operation and there was no return of the disease. She had no trouble although she had had no sphincters during this time. In another case, in which the disease extended as high up as he could feel, he had considerable difficulty in removing the rectum and afterwards discovered that the disease had been treated elsewhere by caustics and the cautery. This patient lived for three years, after which he lost sight of the case. If the growth were irremovable the French method of proctotomy was better, in his opinion, than colotomy.

Mr. WHEELER said that with regard to the recurrence of cancer of the rectum, his experience was not so favourable as that of Mr. Franks. He did not agree with him that patients objected to colotomy; they might have disliked the lumbar form.

Sir W. STOKES said that up till now he had followed the teaching of Professor Syme, who laid down that all cases of cancer of the rectum that were beyond the reach of the finger were unfit for operation. Now, however, he had changed his opinion. He had only operated by the old perineal method on cases in which the disease was near the anus. His results were mostly very satisfactory.

Mr. THOMSON believed that prognosis of cancer of the rectum was more favourable than in most other parts of the body. When the cancer was close to the anus he agreed with Mr. Ball that the perineal operation was the proper one to adopt. When the disease was higher up he had no doubt that the trans-sacral method was the best. It gave most room, and enabled the parts around the seat of the disease to be thoroughly examined. There was very little hæmorrhage, and it was easily controlled.

Mr. HEUSTON, replying, said he did not recommend the perineal operation in a certain class of cases. He did not agree with the President that the peritoneum must be opened if the disease occurs in the middle portion of the rectum. On the anterior aspect the rectum could be removed as high as the prostate, on the lateral aspect 4½ in. of the bowel could be removed, and 5 in. on an average behind, without opening the peritoneum. If the peritoneum was opened it could be effectively closed by the deep row of sutures. He agreed that the trans-sacral operation is the best where the disease is high up in the bowel or where there is much implication of the glands of the pelvis. The glands cannot be cleared out in the perineal operation. In making his incision he went clean through from the anus, as he obtained more room. His experience of colotomy was such that he would never perform the operation unless driven to it, for it did not relieve the patient of pain.

The Section then adjourned.

Reviews and Notices of Books.

Practical Manual of Diseases of Women and Uterine Therapeutics, for Students and Practitioners. By H. MACNAUGHTON JONES, M.D., M.Ch., M.A.O. R.U.I. (*Hon. Caus.*), Fellow of the Royal Colleges of Surgeons of Ireland and Edinburgh, &c. Sixth edition, revised and enlarged. London: Baillière, Tindall, and Cox. 1894.

THE author tells us in the preface that in preparing the present edition he has endeavoured to construct a comparatively new book, that much of it has been re-written, re-arranged, and re-illustrated, and that much new matter has been added. To make room in part for such changes he has omitted those chapters on Diseases of the Mammary Gland which hitherto appeared, and has curtailed the space devoted to less important topics. We cannot quite understand from the following passage whether the author means that flexion causes congestion of the uterus, or whether it is the congestion that causes flexion:

"The uterus is thus balanced in the pelvis by the reflection of peritoneum and encircling cellular tissue. Thus is explained the tendency of the uterus to bend backwards and forwards at this situation, a bending still further increased by the consequent constriction of the bloodvessels at the junction of the cervix with the body, and an increase of weight posteriorly or anteriorly from congestion of the tissues in the posterior or anterior wall of the fundus above the seat of constriction. Constriction leads to congestion, congestion to hyperplastic effusion, and both to excessive tissue formation, which ultimately tends to contraction and resulting flexion."

We see that Dr. Macnaughton Jones is still of opinion that flexion of the uterus causes "narrowing or twisting of the uterine canal at this spot, and stenosis with all its consecutive ills."

We notice that the presence of a tenacious plug of mucus in the cervix is regarded by the author as a frequent cause of sterility; also that simple incision of the lower part of the cervix has frequently to be resorted to, and that in cases of sterility where dilatation has failed, in severe endometritis with dysmenorrhœa, and in spasmodic dysmenorrhœa, he advises division of the cervix uteri and internal os after Sims's method, followed by the introduction of an intra-uterine stem pessary. To our thinking much of the above treatment is unscientific. If it cannot be shown to be definitely beneficial there is at least one good reason for avoiding it—namely, that consequences of more or less gravity have not rarely followed the employment of the measures to which we have just referred. In speaking of cancer of the uterus the author says: "The views of Sir John Williams as to the usual limitation of carcinoma to the cervix uteri and the bearing of this pathological fact on the extent of the operative interference indicated in cancer of the uterus are well known; but they are not borne out either by clinical experience or the pathological researches of others, and his deductions bearing on the relative advantages of high amputation or supra-vaginal hysterectomy [we suppose the author means 'vaginal hysterectomy'], in the author's opinion, are unsustainable on statistical, clinical, or pathological grounds." This is a sweeping condemnation of the views of one who is

generally regarded as the highest English authority on the subject in question. We may, however, go further, and say that in our opinion the passage quoted is scientifically incorrect. We believe that in the very large majority of cases of carcinoma of the cervix, if not in all, in which any operation can cure the patient—using the word cure to mean at least three years without recurrence—the supra-vaginal amputation gives the patient as good a chance of cure as vaginal hysterectomy. After reading the passage just quoted it is surprising to find a few pages later that the author actually says that there can be no doubt that up to the present, so far as statistics can be relied on, recurrence has been postponed for a longer period after supra-vaginal amputation, and he refers to statistics which tell in favour of that view. As regards uterine displacements, it is certainly remarkable to find the author saying that he quite agrees with the opinion expressed by Matthews Duncan in his lecture on Minor Displacements, and deploring "the extent to which the charlatanism of pessary adjusters has degraded practice and opened the door for every form of inventive humbug," while he himself figures, and presumably recommends and employs, a large number of pessaries, including even intra-uterine stem pessaries. In conclusion we feel bound to call attention to, and to strongly deprecate, the somewhat frequent recommendations of various commercial articles which are contained in the work as savouring too much of advertisement.

Lehrbuch der Physiologischen und Pathologischen Chemie In fünf-und-zwanzig Vorlesungen, für Aerzte und Studirende. Von G. BUNGE, Professor in Basel. Dritte vermehrte und verbesserte Auflage. Leipzig: Verlag von F. C. W. Vogel. 1894 (*Manual of Physiological and Pathological Chemistry.* In Twenty-five Lectures, for Practitioners and Students. By G. BUNGE, Professor at Basel. Third enlarged and revised edition. Leipzig: F. C. W. Vogel. 1894.)

THOSE who have studied Professor Bunge's Lehrbuch, either in the original or in Wooldridge's excellent translation, will warmly welcome a third edition, which has been brought thoroughly up to date. The second edition was divided into twenty-one lectures, but in the book before us a somewhat different arrangement has been made, and separate chapters are devoted to the blood and to the lymph, whilst the chapter in the earlier edition on the nitrogenous products of metabolism has been divided into two. In both these subjects very considerable additions have been made, and as a result of more recent investigations considerable modifications are noticeable in several of the points taken up. Perhaps the most interesting additions of all are the chapters on infection and on fever, and, as one would naturally expect from a consideration of Bunge's earlier lectures, these contain a good *résumé* of these two subjects from the purely physiological, rather than from the pathological, point of view. At the same time we must confess to a feeling of disappointment on rising from the perusal of these chapters, as the numerous facts here recorded have filtered through the author's mind without receiving much of that imprint of originality which characterises so much of the other part of the work, and we cannot help feeling that these two additional chapters form the least instructive part of the work, except in so far as they give a short but admirable account of what has been done. The work in the other chapters has been thoroughly revised, some of the parts have been rewritten, and much new and original matter has been added. Altogether these lectures show that the author has not been content to rest satisfied with the laurels that he gained by the publication of the earlier editions of his book.

Report of the Department of Pathology of University College, London. Vol. IV. Edited by VICTOR HORSLEY, F.R.S., F.R.C.S. Eng., and VAUGHAN HARLEY, M.D. Edin., M.R.C.P. Lond.

THIS volume of reports of original research carried on by various investigators cannot but increase the reputation of the individual contributors for thorough and conscientious work. The papers have already been published in the Philosophical Transactions of the Royal Society, and are now issued bound up together for convenience. Most of the investigations were carried out with the assistance of grants from the Royal Society and the British Medical Association. There are five elaborate papers on Neurology. Of these, Dr. Risien Russell contributes two—"Experimental Researches into the Functions of the Cerebellum" and "An Experimental Investigation of the Nerve Roots which enter into the Formation of the Brachial Plexus of the Dog." Mr. Spencer publishes the results of his researches on the Effect Produced upon Respiration by Faradic Excitation of the Cerebrum in the Monkey, Cat, and Rabbit, in a paper which is very fully illustrated by tracings and photographs, and also collaborates with Mr. Horsley in an elaborate paper on the Changes Produced in the Circulation and Respiration by Increase of the Intra-cranial Pressure or Tension. Dr. Beevor and Mr. Horsley have continued their minute analysis of the excitable region of the cerebral cortex in the monkey, and give the result of their stimulation of the so-called centres for the facial, lingual, and pharyngeal movements. In the department of pathology a beautifully illustrated paper on Madura Foot by Professor Rubert Boyce, and one by Dr. Surveyor upon the Existence of more than one Fungus in Madura Disease (Mycetoma) are given. We congratulate Mr. Horsley and Dr. Vaughan Harley on the issue of this new volume, and on the activity and good management of which it is the outcome.

LIBRARY TABLE.

Organic Chemistry (the Fatty Compounds). By R. LLOYD WHITELEY, F.I.C., F.C.S. London: Longmans, Green, and Co. 1895.—The author of this little work states in his preface "that it is quite impossible to learn organic chemistry *properly* by reading only." So far we entirely agree with him, and we observe that the preparation of all the simpler organic bodies has been given, but we think that this alone is scarcely sufficient reason for adding another work to the already crowded library of text-books on organic chemistry. We need not remind the author that his work *per se* will not enable the student to obtain a real knowledge of organic chemistry, and that its use in the laboratory, in the face of such works as "Fisher's" and "Streatfield's" Organic Preparations, is considerably lessened, unless the idea is that very elementary students should study only one text-book. We think that such a valuable method as that of Kjeldahl for estimating nitrogen should have had more than ten lines devoted to it, since it has almost entirely superseded the other methods. Also in the section on Alcoholometry the specific gravity method after distilling might have been dwelt upon more fully. With regard to the theoretical portion of the work the author deserves praise for the extremely careful and concise way in which he has dealt with successive portions of the subject.

Therapie der Harnkrankheiten. Von Professor Dr. C. POSNER. Berlin: Verlag von August Hirschwald. 1895. (*Treatment of Urinary Diseases.* By Professor C. POSNER. Berlin: August Hirschwald. 1895.)—This small volume contains the subject matter of ten lectures by Professor Posner of Berlin, and is uniform in scope and character with a similar book which he published last year upon the "Diagnosis of

Urinary Diseases." The subjects are treated in the following order: 1. Acute Gonorrhœa. 2. Complications of Acute Gonorrhœa. 3. Chronic Urethritis. 4. Complications of Chronic Urethritis. 5. Sequelæ of Chronic Gonorrhœa. 6. New Growths in the Urinary Passages. 7. Chemical Changes in Urine. 8. Calculous Disease. 9. Nervous Functional Disorders. 10. Urinary Poisoning. It will be seen that the whole ground is thus fairly well covered, vesical and prostatic affections being treated under the heads of Complications of Urethritis and New Growths. The scope of the work does not admit of the discussion of great detail, but it is written by one well versed in the subject and thoroughly versed in modern practice. As affording a systematised review of the whole subject the lectures are of service, but they fail to display one really valuable character of a work of this class—so conspicuous in Sir Henry Thompson's lectures—namely, a close attention to those practical details which are of most service to the practitioner.

The *Veterinary Journal* for this month contains several papers of interest, among them being the continuation of Mr. Pech's essay on Diseases communicable from the Lower Animals to Man, Dr. Randolph's account of Two Successful Cataract Operations on a Dog, Veterinary-Captain Pease's description of Distomatosis in Cattle, with papers on Pathogenic Bacteria and Albuminuria in Cattle by Mr. Hoare, extracts from foreign journals, and other matter deserving the attention of members of the veterinary profession.

Archives de Neurologie for May Paris: Bureaux du *Progrès Médical*.—The most interesting part of this number is the case of so-called Hysterical Hemianopsia, by Dr. Pierre Janet. The occurrence of hemianopsia as a hysterical symptom is doubtful, and we venture to think that this case does not furnish any definite or certain evidence on the point. There is a continuation of the article on Intoxication in Epilepsy by Dr. Voisin. Some records of clinical cases and the usual neurological reviews and accounts of meetings of learned societies make up what is on the whole a very interesting number.

Dublin Journal of Medical Science. May, 1895. Dublin: Fannin and Co. The first article in this number is an account of three cases of Friedreich's Ataxy Associated with Idiotcy, to which we alluded in an annotation last week. The other articles are on Defective Infantile Life Unrecognised in State Medicine and on Private Hospitals. There are numerous reviews and bibliographical notices and the usual medical miscellany. The number is an unusually interesting and full one.

The Westminster Review.—The marriage question affords matter for the most prominent article in this magazine, and in "Some Modern Ideas about Marriage" E. M. S. pleads that *divorce* should be no longer synonymous with *disgrace*. Dr. G. Rayleigh Vicars advocates life-long imprisonment in lieu of capital punishment; and there is an interesting paper on the late Charles Bradlaugh.

The *Veterinarian* for May has also its quota of matter similar to that of the *Veterinary Journal*, though, perhaps, its most attractive paper to other than veterinary readers is the continuation of Professor Ewart's Telegony, in which he indicates the direction experiments should take in order to prove or disprove the influence of the first sire on the future progeny of female animals by subsequent sires. The experiments he proposes would certainly go a long way to demonstrate whether such influence does exist, though it is to be apprehended that some of them could not be easily carried out. Professor Stockman reports a well-marked instance of Tuberculous Lesions in the Muscles of a Pig; and Professors Mossleman and Hebrant of Brussels treat of Osseous Cachexia in Animals. There are also other papers of some value, with "Abstracted Notes" from various journals, and reviews of books. We observe a startling statement made by the reviewer in his notice of Tegetmeier and Sutherland's work on Horses, Asses, Zebras, Mules, and Mule-breeding. He says: "Considering the many advantages offered by mule labour it is little less than astounding that the present should be the first work on the subject ever published in the English language." It is certainly little less than astounding that the writer of this announcement did not discover that a large portion of the section (for it is only a section) of the book devoted to mules and mule-breeding is made up of quotations from works published in English, while other writings on the subject in our language are not referred to in the book—notably the article in the Encyclopædia Britannica, and the chapter in Furse's handbook on Land Transport, where much information is given. At any rate, Riley's work on the Mule, published many years ago, should be known to everyone who attempts to deal with the subject.

Analytical Records
FROM
THE LANCET LABORATORY.

FERROPYRIN.

(KNOLL AND CO., LUDWIGSHAFEN-ON-RHINE. LONDON: B. KÜHN, 36, ST. MARY-AT-HILL, E.C.)

FERROPYRIN is a dry, bright, chrome-coloured powder, dissolving in water to form a blood-red solution. It is a compound of two molecules of perchloride of iron with three molecules of antipyrin, and is accordingly represented by the formula $(FeCl_3)_3(C_{11}H_{12}N_2O)_3$. The solution is slightly astringent, but has no corrosive action, while it mixes perfectly with hydrochloric acid, pepsin, potassium bromide, and tannin-free tinctures. The solution yields the ordinary reactions of per-salts of iron, and the antipyrin can be readily detected by nitrous acid, with which it strikes a beautiful emerald-green colour. The object of this interesting and beautiful compound (it is a true chemical combination) is, of course, to be able to administer a palliative analgesic together with a hæmatinic, and the results of its trial in cases of chlorosis, anæmia, and in other conditions where there is blood impoverishment were most satisfactory.

BAKING POWDER.

(ERNEST ALLMAND, 9, HOPE-STREET, WREXHAM.)

It is satisfactory to observe that the list of alum-free baking powders is gradually extending. The above specimen may be justly assigned a place together with those which were pronounced pure and free from alum in the report of THE LANCET Commission on Baking Powders published in our columns on March 3rd, 1894. It yields a satisfactory volume of carbonic acid gas when moistened, and the ingredients are of a purity which is demanded of a preparation that is intended for mixing with food. We hope that the Food Products Adulteration Committee now sitting will be led to recommend shortly that baking powder be included in the Food and Drugs Act, so that proceedings may be successfully taken against those who would "alum" food by this indirect means.

CADBURY'S COCOA ESSENCE.

(CADBURY BROTHERS, BOURNVILLE, NEAR BIRMINGHAM.)

The great and important improvements that have been effected in recent years in the manufacture of cocoa have been largely due to the placing upon the market of standard preparations of the above type, Messrs. Cadbury Brothers being amongst the first to produce a cocoa of satisfactory purity, quality, and flavour, and of easily digestible character.

From the dietetic point of view the removal of the greater portion of the indigestible fat of cocoa is the most important step in the process, which is nevertheless carried to a successful issue without impairing the cocoa in any degree, and so satisfactorily is it done that recourse to objectionable diluents like starch and sugar is quite unnecessary. The quantity of fat eliminated in the course of manufacture is at least two-thirds. On incineration the cocoa yields 4·86 per cent. ash, of which 3·62 parts are insoluble and 1·24 soluble, the alkalinity of the latter being equivalent to 0·44 per cent. potash (K_2O). In connexion with the evidence afforded by a microscopic examination the results leave no doubt of the purity and excellence of this specimen, and the figures relating to the alkalinity of the soluble ash in particular show that there has been no treatment with fixed alkalies, or with ammonia according to other chemical tests. The preparation represents, therefore, the standard of highest purity at present attainable in regard to cocoa.

SACCHARIN.

(GILLIARD, P. MORMET & CARTIER. LONDON AGENCY: R. W. GREEFF & CO., 3, EASTCHEAP, E.C.)

We have received from this new agency a sample of saccharin and a sample of the more soluble sodium salt. The former is marked 500 No. 1, and the latter 300 No. 4, which indicate their respective degrees of sweetening power when compared with cane sugar. The sample of saccharin, which burned completely away on platinum foil, is stated to be free from para-sulphamine-benzoic acid, while the other specimen left a fusible residue which contained sulphate, derived, of course, from the sulphur of the benzoyl-sulphonic-imide. Both are evidently fine and pure products.

New Inventions.

CELLULOID VAGINAL DOUCHE.

THE following relates to a special form of vaginal douche (illustrated below) for which certain important advantages are claimed—viz.: 1. Shape and curve of pipe facilitate

introduction (oval on section). 2. Transparency ensures cleanliness. 3. Unbreakable. 4. Self-retaining (owing to expanded extremity). 5. Inflated adjustable rubber cushion to occlude the vulval outlet. 6. Can be used by patient herself and is very comfortable in use. 7. It entirely obviates use of drawsheet. No risk of wetting bed. 8. Readily takes into four parts when necessary to clean. 9. Cannot get out of order. 10. May be used with any ordinary india-rubber syringe. 11. Large waste pipe. 12. It may be used simply to irrigate the vagina or to flush out that passage. This latter is done by clamping the waste pipe with the finger and thumb whilst the bulb of the syringe is compressed two or three times. Upon setting free the waste pipe the muscular action of the vaginal walls is at once brought into use to expel the injected fluid (and with it any blood-clots or discharge) from the vaginal cavity through the numerous large apertures in the tube. If only used as a syringe it is superior to those in general use, as the comparatively large celluloid pipe will open out the folds of mucous membrane, and thus give a much better chance of thoroughly cleansing it by means of the injected fluid. 13. With special tube may be used to wash out the uterus. 14. The price compares very favourably with any other apparatus for the like purpose. Messrs. Arnold and Sons of West Smithfield are the agents.

Caledonian-road, London, N. ROBT. H. RAINS, M.R.C.S.

THE CAMBRIDGE SCHOOL OF MEDICINE AND QUALIFIED PRACTITIONERS.—We are glad to learn that the proposal to hold a week of demonstrations and lectures at Cambridge for the advantage of qualified practitioners is likely to be a success. The time is from Monday, July 1st, to Saturday, July 6th. Mr. Joseph Griffiths of King's College is the hon. secretary. Cambridge shows a sense of the times and of her own duty in such adaptations of her facilities for teaching.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The final examination for the Fellowship of the Royal College of Surgeons has been held this week. It has extended over five days—viz., from Monday to Friday. On Tuesday, 21st inst., the examinations, both written and *viva voce*, on surgical cases took place, and, as usual, many Fellows of the College attended to see the cases which had been collected. A notice was posted in the examination rooms requesting visitors not to approach too closely to the candidates under examination, and asking them also to make as little noise as possible. Probably as a result of this notice the examination rooms were much quieter on Tuesday than on many previous occasions, when, as we mentioned in noticing the clinical examination last November, some of the visitors seemed to imagine that the cases were specially provided for themselves. Many of the cases shown were of very great interest, though we can only mention a few of the more striking. 1. A man aged twenty-eight showing numerous exostoses, especially on the bones of the limbs. They were unusually large. Several other members of his family were similarly affected. He was blind in both eyes; this was attributed by him to injury at the age of fourteen years, but was possibly due to congenital syphilis. 2. A young woman having a firm swelling at the upper end of the left popliteal space. Nine months ago she had had a tumour of one year's growth removed from the back of the left thigh, and three months later the present swelling appeared. It was evidently a sarcoma. 3. An elderly man with a small tumour of the umbilicus; no swelling could be felt in the abdomen, but the growth was probably malignant, and secondary to some abdominal tumour. 4. An elderly woman with an enlargement in the left parotid region of seventeen years' duration; the swelling was very obvious in the mouth, reaching nearly to the middle line, and interfering to a great extent with deglutition. It was probably fibrous in nature, and arose from the tonsil or from the deeper portion of the parotid. 5. A man with a chronic effusion in the left knee, and for three months having had a firm swelling over the right great trochanter; this was probably due to gummatous deposit in the wall of the bursa over the great trochanter; the joint affection was also probably syphilitic. 6. A young man having a swelling in the mesial plane of the neck; it projected below the jaw, but especially extended into the mouth, pushing up the tongue and greatly hindering swallowing. The contents were apparently quite liquid; it was, therefore, probably not a dermoid. The most likely diagnosis seemed to be that it was due to effusion into the bursa between the genio-hyo-glossi.

THE LANCET.

LONDON: SATURDAY, MAY 25, 1895.

THE authorities of the Royal Medical Benevolent College are to be thanked for securing Mr. BALFOUR'S presidency at the twenty-seventh festival dinner. It is becoming evident that the public, apart from political proclivities, looks to Mr. BALFOUR as to one of its foremost guides in deep matters of thought and feeling. In his speech at the dinner we get a glimpse into his estimate of medicine, its claims on the public regard, and its most essential functions. Like Mr. GLADSTONE and Lord SALISBURY he has thought much on the subject and his conclusions are not uncomplimentary to the profession. In company with most speakers he recognises the amount, the lavishness, of its gratuitous or ill-paid work—the skill and the time given, often by its most meritorious members, to those who cannot recompense them. And on this fact he founds his claim for the greatest medical charity of our country, one that provides for the widow or the orphan—pension or foundation scholarship—of those who in the very nature of the sphere or the circumstances in which they worked, or of the time they had to work in, had not the opportunity to "provide for their own house." The work of the profession is done very much in secret. What agonies undreamt of by the public does not the hospital surgeon or physician relieve? And the general practitioner in a poor district is not one whit less beneficent as he carries his help and his counsel to the houses of the poor in their extremities of suffering, and in doing so often lays the foundation of his own disease. It would not be unreasonable if the charities of such a profession were generously subsidised by the wealthy members of the public. We will venture to hope that the £1700 which were announced at the dinner do not represent the full response to Mr. BALFOUR'S appeal.

Not less interesting to our readers than his argument for the generous consideration of the profession by the public is his estimate of our position from a critical point of view. He thinks the debt of humanity to medicine, though large in the past, is increasing and "likely to increase in the future in a rapidly extending ratio," and this because it is becoming more sure in its methods and in the application of science to its art. "Science and practice are every day more and more joining hands. ..... Medicine is becoming more and more the work of the scientific expert and less the work of the empiric"; and he anticipates not only an "incomparable insight into the nature and cause of disease," but an ability to command in a far larger measure than we do now "the remedies which may be successfully applied." Such estimates by such a judge may well please the profession. But they have their serious side. They strike at all superficial and careless work, and should stimulate every practitioner to regard with interest as being one to be met with skill guided by science each case he is called to minister to. This is the true line of success—the real way of victory over all pretenders—to get the "incomparable insight" into the cause of each disease we are called to treat, and in that light to deal with it.

Mr. BALFOUR seems rather afraid that with all its new lights the profession may come to aid longevity too much, especially if men are temperate. As he says, temperance is a virtue which medicine may counsel, but cannot enforce. Undoubtedly the clear message of medicine to men is one of temperance. The want of this virtue will in most cases destroy the best constitution and defy the best surgery and medicine alike. A friend of Mr. BALFOUR'S thinks that by more perfect medicine the span of life may be extended to 120 years. It may be so. An old estimate (Ecclesiasticus) gave a man's days as possibly 100 years, and twenty more would seem a slight improvement for over twenty centuries to effect. Mr. BALFOUR in the end of his interesting address suggests that the mere prolongation of life is not one of the triumphs of medicine. He demands of medicine that it shall ease men of pain and that it shall render the allotted life we have more available for work and duty. Given this, he would relieve it of the duty of prolonging a painful and useless life. There is a doubtful ring about this suggestion. It is very difficult to dissociate the function of relieving pain from that of prolonging life. They are practically synonymous. But we cannot admit that even where we cannot relieve pain we are one whit the less bound to preserve and prolong life. "This long disease my life" has been true of many others than POPE who have made great contributions to the happiness of the world. A late physician who did more than most men of his order used to say that he never had a day's health in his life; yet few men enjoyed life more or used it better. There is a charm in life which we should expect Mr. BALFOUR to recognise apart from conditions of perfect ease—

> "For who would lose,
> Though full of pain, this intellectual being—
> Those thoughts that wander through eternity?"

Man is a creature of such possibilities that the prolongation of his life for even a few weeks or months may have great importance, and although "the laws of the realm may punish Christian men with death for heinous and grievous offences" it is not yet recognised as part of a medical man's duty that he should take away that which he cannot give back.

THE oration by Mr. PEARCE GOULD on the Recent Evolution of Surgery was more than a mere domestic event in the history of the Medical Society of London. It was a statement of the nature and significance of the recent development of surgery such as could only be made by an orator who had made some mark both as a teacher and a surgeon. The crowded and representative audience, composed of men in every branch of practice, showed that the subject was one of absorbing interest, and the close and quiet attention with which the address was listened to was the best proof that the orator had succeeded in his object. Surgery is no longer a mere matter of handiwork. It is an object-lesson in which the great facts of physiology, biology, and pathology find recognition. Mr. GOULD'S address will have historical interest not only as the exposition of this change, but as tending to give the change great confirmation. Within the memory of middle-aged men the surgeon was little more than a user with marvellous dexterity of knives and scissors

and needles. But the results were not equal to the manipulation. Not only so, the sphere of interference was very limited. Nearly everything beneath the surface of the body was considered out of reach and was relegated to the physician. Now the surgeon runs the physician very closely in respect of knowledge of the fundamental sciences which underlie all successful practice and has that exquisite regard for the peculiar properties of every organ and tissue which had hitherto been credited mainly to the physician.

In all recent expositions of surgery and its progress the introduction of antiseptics has overshadowed all other facts in prominence. Mr. GOULD last Monday night was very successful in avoiding the use of this hackneyed phrase, but, all the same, this fact was the foundation of all that he said, as will appear. His point was to show that something has happened in the development of surgery in the last twenty-five years more important than the ordinary progress of any similar period or of any previous century, "or even millennium." Some may think the proposition extreme; but the steady way in which Mr. GOULD built up stone after stone in its demonstration will leave no doubt that in the main he was right. Progress was not a strong enough word for his purpose. Evolution was preferred. The word in this sense and connexion is open to some criticism. It implies, to our thinking, something essentially progressive, continuous, and even. But it is a part of Mr. GOULD'S contention that something has happened in surgery out of the common, expanding and elevating it in every branch and department, and that this has produced *rapidly* a change in the character of all the work done. This is not mere evolution. It is more like revolution. It is, in fact, discovery. Of course, there is a sense in which discovery is evolution; but we do not apply that word to NEWTON'S discovery or even to DARWIN'S. A grand conception, a pregnant idea, may be regarded as part of a great progress of mental evolution, but the word itself is rather applicable to great, continuous, equable processes in nature affecting organised beings. This, however, is a detail. The excellence of Mr. GOULD'S address consisted in the wide view he took of the change that has come over surgery and over the spirit in which it is practised. His analysis of the elements of improvement was as admirable as it was original. The removal of the formerly admitted anatomical restrictions upon surgical operations; the higher anxiety to preserve the physiological integrity of the organism; the essentially conservative nature and tendency of the operations practised under the new system; a higher conception of the nature of surgical operations, of the way in which wounds are to be repaired, and of the personal responsibility of the surgeon for avoiding disasters from his own procedures more terrible than the original disease; the clear apprehension that the causes of disease have to be treated directly; the introduction of what are practically physiological operations into surgery—these are the elements of the great evolution or revolution which would make the practice of any living surgeon unintelligible to a surgeon who practised fifty years ago if he could be suddenly brought back to witness the change. They are ideal changes which raise the spirit in which work is done, the methods by which it is done, and the results which follow.

Though Mr. GOULD said scarcely anything on Monday night of antisepticism, his tribute to Sir JOSEPH LISTER was the feature of his address. He referred powerfully to the incident of Sir JOSEPH LISTER'S paper read before the same society twelve years ago on the direct suture of the fragments of a transverse fracture of the patella, and to the remark of a distinguished junior that such a procedure was magnificent, but was not surgery! And in his peroration he did not hesitate to place Sir JOSEPH LISTER'S name in a line with HARVEY'S and with JOHN HUNTER'S as the one which now shines with an unrivalled splendour on the page of surgical history. This praise is just, and it is not premature. Mr. GOULD was right in emphasising the duty of doing honour to men to whom honour is due while they are alive. Nor is the praise less just because it comes from British lips. It will be echoed from every civilised country. But it was well spoken here. Foreigners will not think the less of us or of him for doing justice to Sir JOSEPH LISTER, to whom more than to any other man we owe the elevation and the advance of surgery, whose methods have introduced safety where formerly all was full of risk, and have had an effect on the comfort of patients after operation which is only less remarkable than the anæsthesia which deprives the operation itself of terror.

THE importance of the discovery of argon, a newly identified constituent of the atmosphere, by Lord RAYLEIGH and Professor RAMSAY is yet to be estimated. Already it has opened up ramifications which have bewildered many of our leading scientific men, some of whom have been led into quite new fields of study of which argon must be regarded as the gate. First came the observation of the eminent French chemist, M. BERTHELOT, that when argon was submitted to the action of benzene vapour under the influence of electrical discharge there was some indication of a combination having taken place, so that not a few began to think that argon—meaning inert—was not a well-chosen name. But the most interesting result of M. BERTHELOT'S experiments was the fact that after some time the silent discharge through this mixture became gradually luminous, and the tube was lighted up in almost its entire extent at first with a violet tint with a reddish rain of fire, changing gradually to a splendid green shade visible even in full daylight and recalling in a most striking way the brilliant spectacle afforded in the aurora borealis. Professor RAMSAY followed soon after with the startling announcement that he had found that the gas evolved from a certain mineral (clèveite or uraninite) on treatment with acid was argon and not nitrogen, as had all along been supposed, and that, further, a spectroscopic examination of this gas revealed a bright and perfectly definite yellow line situated between the well-known sodium lines, which left not the slightest doubt that an element hitherto regarded to exist only in the sun (helium) had been set free from a terrestrial mineral. This has since been fully confirmed, and helium has been added to the list of simplicities—so far as we know them to be simplicities,—while

many of its properties have since been ascertained. Professor CLÈVE, however, from whom the mineral derives its name, was unable to confirm the presence of argon, although he expressed no doubt as to the presence of helium. "What makes me most curious," he wrote to Professor THORPE, "is that our helium gas was free from argon and that Mr. RAMSAY'S did contain that most curious stuff. Is there any relation between argon and helium, and are we approaching a new epoch in chemistry?" At once there arose a mystery about "clèveite gas," which became still more obscure when Professor NORMAN LOCKYER declared that he had found no argon, but hydrogen. Thus apparently the same clèveite had been tortured (to use Professor DEWAR'S happy expression) by three independent investigators into giving up to the first argon with helium, to the second helium with hydrogen, and to the third helium. Could clèveite be the mystic philosopher's stone which in its substance could transform one element into another, so that, according to the condition of experiment to which it was submitted, it gave up and presented to one argon, to another helium, and to another hydrogen? Or does it contain the primary stuff of which all elements must be be composed in accordance with the celebrated hypothesis of PROUST, or, later, of Professor CROOKES, and that on extraction it assumed one of those forms known to us as hydrogen, helium, or argon? The idea, however, that we were nearing the transmutation or transformation of elements vanished rapidly into thin air when Professor RAMSAY announced a few days ago that the gas he originally obtained was contaminated with atmospheric argon, but that the gas accompanying helium was none other than hydrogen with traces of nitrogen, so that it transpires that what was originally regarded as nitrogen evolved from clèveite and then argon was after all helium with hydrogen and traces of nitrogen. That, at any rate, is the latest representation of the composition of clèveite gas. It is all the more remarkable that in searching for what Professor RAMSAY thought would most likely turn out to be argon he stumbled upon another element altogether—the long-missing helium. For the present this discovery must be regarded as the most important outcome of the splendid and laborious investigations which led Lord RAYLEIGH and Professor RAMSAY to announce last year for the first time the existence of this constituent in the atmosphere. The possibility of further discovery does not, however, stop here. Professor NORMAN LOCKYER, for instance, who obtained the gas from the mineral by heating it in vacuo—a method he uses for the extraction of gases from meteoric stones,—is led to suggest that the gas is one of complex origin, and spectroscopic analyses show distinctly that several lines in clèveite gas are closely related to the solar and stellar phenomena. "We appear to be in the presence of the *vera causa*," he writes, "not of two or of three but of many lines which so far have been classed as 'unknown' by students both of solar and stellar chemistry; and if this be confirmed we are evidently in the presence of a new order of gases of the highest importance to celestial chemistry, though perhaps they may be of small practical value to chemists, because their compounds and associated elements are, for the most part, hidden deep in the earth's interior."

It will be readily realised that the interest created by these observations is intense, and we can imagine the scientific thinker drawing a deep breath in almost feverish expectancy that before very long a portion, at any rate, of the veil which keeps many of the cosmic mysteries from our view will be drawn aside. Then we shall indeed attach some importance to Lord RAYLEIGH'S and Professor RAMSAY'S joint discovery.

THERE was a time, not very remote from the present, when complaints were frequently made of the tardiness with which the national returns of birth and death were issued from the General Register Office—the more important of these returns, up to a recent date, having been rarely available to the public until nearly two years after the expiration of the period to which they severally related. Having regard to the vastly greater interest which nowadays attaches to the official mortality returns of Somerset House in consequence of their direct bearing on the question of local sanitary administration, we are glad to note that the publication of the Registrar-General's quarterly and annual reports and returns has of late been considerably expedited; and as this has been accomplished without, we believe, any addition to the official staff we regard the event as highly creditable to the Statistical Department. For it is obvious that so far from the work becoming lighter as time goes on the number of facts to be dealt with in successive reports increases year by year, almost *pari passu* with the growth of the population. The circumstance which has suggested the above remarks is the publication within the last few days of the Registrar-General's Annual Summary for 1894, which gives useful information respecting the mortality that prevailed amongst a considerable portion of the population of England during the fifty-two weeks of that year.

Originally the annual summaries had exclusive reference to London and a few of the larger provincial towns. The present summary, however, relates to 100 of the most important urban communities of England and Wales, including, of course, the metropolis; and with respect to many of these areas the information given is more extended, and for local sanitary purposes far more serviceable, than any that has hitherto been accessible In addition to the thirty-three great towns included in Table I., full mortality statistics for which have been published in the periodical returns for the last few years, corresponding information is now for the first time given in Tables V. and VI. relating to sixty-seven other English and Welsh towns, which, although of less size than the thirty-three chief towns before referred to, are, nevertheless, of considerable importance and contain amongst them an aggregate population of more than three and a half millions. Many of these towns are either sea-side or inland health resorts, and consequently an authoritative statement concerning their death-rate, and especially their mortality from infectious disease, cannot be otherwise than interesting and serviceable to intending visitors.

Another new feature in the recently issued summary which is worthy of attention is the introduction into Tables H. and I. of a column giving the distribution of the corrected mortality from phthisis in each of the five groups of sanitary areas into

which the metropolis is divided for statistical purposes. In Table H. the deaths from phthisis are given in the several sanitary areas of London, but in view of the uncertainty attaching to estimates of population for areas of this kind we think that the Registrar-General has acted wisely in abstaining from the publication of rates of mortality for populations smaller than the five groups of sanitary areas which are comprised in Registration London. When the census of next year shall have been completed we shall hope to see a table published in due course similar to the one now given (Table I.), but dealing with individual sanitary areas, and giving, on the secure basis of the census figures, the rates of mortality not only for phthisis, but for the other diseases also which are at present included in the table referred to. Another table, which we notice for the first time in the present annual summary, is the one marked C. on page viii., which shows the deaths from influenza registered in each of the metropolitan sanitary areas in the five several years 1890 to 1894, practically the period covered by the epidemic, which has even now scarcely come to an end. Yet another new table (E.) will be found at the foot of page x., which gives the admissions and deaths at the Metropolitan Asylums Board Hospitals, the Highgate Small-pox Hospital, and the London Fever Hospital of persons suffering from small-pox, scarlet fever, diphtheria, and enteric fever respectively. The admissions and deaths are given for the ten years 1885 to 1894, and are extremely interesting as showing a rapidly increasing tendency on the part of the public to avail themselves of public hospitals for the treatment and isolation of the infectious sick. It is necessary, however, to utter a word of warning against the acceptance of the figures in this table as being in any degree an accurate measure of the amount of infectious sickness actually present at any given period in the metropolis. It is well known that whenever such a disease as, for instance, scarlet fever becomes seriously epidemic in London the hospitals speedily become filled with cases of that disease, and thus no available space remains for the accommodation of other and not less infectious forms of fever — diphtheria, for example, which disease, as is pointed out in another part of this interesting summary, has been steadily making headway in London for several years past. As far as may be judged by the mortality statistics of the 100 great towns, the health of England and Wales during the year 1894 was, on the whole, eminently satisfactory. For instance, the thirty-three principal towns, which contain an aggregate population of more than 10,000,000, showed a death-rate of 18·1 per 1000 only, against an average rate for the ten previous years of 21·3. London was subject to a mortality not exceeding 17·8 per 1000, or 2·6 per 1000 below the average; and many of the other great towns showed a decline even greater than these. Turning to the figures for the sixty-seven smaller towns, now published for the first time, we are struck by the extreme lowness of some of the rates. The 3,500,000 people inhabiting these towns died in 1894 at the average rate of 16·0 per 1000. Amongst these towns not one had a rate exceeding 22·1 per 1000, whilst the rates were as low as 9·5 per 1000 in Hornsey, 10·0 in Bournemouth, and 10·3 in Eastbourne.

Annotations.

"Ne quid nimis."

THE MEETING OF THE GENERAL MEDICAL COUNCIL.

THOUGH we are writing before the issue of the programme of business at the approaching meeting, we cannot be wrong in assuming that the subjects to be discussed will be of varied and considerable interest. One change in the *personnel* w be felt as well as seen. Sir John Simon will be conspicuous by his absence. It must, however, be admitted that his successor will be a real acquisition to the Council. Considering the importance of questions of State medicine and the multiplication of medical officers of health, it would have been unsatisfactory had any less authoritative exponent of the State interests in sanitation than Dr. Thorne Thorne himself been appointed to succeed Sir John Simon. Some other day when a Crown vacancy occurs the State may generously give it to a general practitioner, as it has done before in the case of Scotland, but all must allow that Sir John Simon's successor is well chosen, the more so as a chief feature of the business will be the discussion of reports on Diplomas in State Medicine. It is expected also that a general report on the recent inspections of examinations will be received from the Examination Committee. It would be sanguine to expect that sundry cases of alleged misconduct will not occupy a considerable part of the time of the Council. The subjects of the Midwives Registration Bill and of the issue of certificates to midwives by the Obstetrical Society and other bodies will necessarily come before the Council. At the last meeting, as the minutes of 1894 show, a report was expected from the Executive Committee on the proposed amendments of the Medical Act, but it was not forthcoming. Doubtless it will appear next week. The fate and future of the Apothecaries' Society of Dublin will have to be considered and determined by the Council. Perhaps the most important question of all is the fixing of final arrangements for the issue of a new edition of the Pharmacopœia, about which considerable difference of opinion exists. Our readers may like to know that the Council will commence its meeting on Tuesday next at two o'clock with an address by the President, Sir Richard Quain.

A CASE OF ALLEGED PREMATURE BURIAL.

UNDER the sensational heading "Le Cauchemar" we read in *Le Petit Journal* the most recent case of alleged premature burial. It is copied from Greek newspapers, and alleges that the Italian Consul at Mersina, in Turkey in Asia, the name being given, died the week before last, the word "mort" being in italics. The funeral took place with much pomp and ceremony, all the foreign consuls and local authorities being present; the burial took place at the Roman Catholic cemetery of the town. That same evening one of the keepers of the cemetery, so runs the story, heard cries coming from the vault just closed. Seized with terror, he ran to forewarn the family. They hastened to the cemetery, and the coffin was opened. Then follows a harrowing description of what was seen; which need not be repeated since the appearances were such as would naturally result from decomposition, and to the eyes of terrified laymen accepting implicitly the story of the alleged cries would present all the supposed phenomena of premature burial No mention is made of the nature of the last illness or of the cause of death, nor are we told what followed upon the alleged frightful discovery. As the deceased was a Roman Catholic it may be assumed that he had the services of a priest up to the last, and it is impossible to believe

that he, with all the other attendants, relatives, friends, medical practitioner, undertaker, &c., should be deceived. Again, although the interment in foreign countries takes place within an interval which, to English ideas, seems very short, it is for the very reason which the writer of the article gives as the only reason which justifies interment—viz., putrefaction. This in many countries is so rapid as not only to justify, but to render imperative, burial within twelve hours, and in England most medical practitioners can call to mind cases where the closure of the coffin has been required within a similar or even shorter period. In some cases, by no means few, decomposition of some parts of the body may be said to precede death. But nothing that has been published has yet disproved the fact of death being perfectly ascertainable. Sir Francis Seymour Haden in urging burial within thirty-six hours of death dismissed the alleged difficulty of premature burial with the remark that the words of a witness "I knew that he was dead" were generally accepted without dispute. There was a case published in THE LANCET not long ago[1] in which an elderly woman was laid out before death had actually taken place. Then there was the alleged case at Newcastle of apparent recovery from death, which was contradicted, and other cases, which all go to prove the rule that death is not a matter requiring skilled evidence, but is in the large majority of cases a fact evident to the meanest capacity. Every day persons are taken to hospitals, arriving there at the last gasp or actually dead. It is necessary to give a decided answer, since the person, if living, must be conveyed to a ward or continue to receive attention where he or she is. If, on the other hand, death has taken place, the body must obviously be taken to the "dead-house." It may be confidently asserted that such a criminal mistake as sending a living person to the mortuary has never been made; it would, indeed, be unpardonable with medical men on the premises. But these are only a very small proportion of the total number of deaths, the large proportion of which occur in the homes of the rich, the poor, and the middle classes, in presence of laymen and laywomen. The fact of death can very rarely be a matter of doubt, and in such case it is inconceivable that burial would be permitted. It is high time that the editors of all papers which wish to be considered respectable should refrain from publishing stories which can serve no good purpose, and we trust before long to learn that this most recent one has been proved to be a fiction.

IMPROVEMENTS IN THE TECHNIQUE OF THE DIPHTHERIA CULTURE TEST.

A USEFUL modification in the mode of practising the culture test for diphtheria is described by Dr. Ohlmacher in the *Medical News* of Philadelphia of May 4th. He draws attention to the fact that when the culture test was used for sanitary purposes alone the amount of time consumed in the bacteriological examination was of no great moment, but with the advent of the antitoxin treatment of this disease an entirely new era of usefulness for this test was inaugurated. In the best of existing methods it is necessary to allow an interval of from twelve to eighteen hours of incubation to elapse before a tube culture inoculated with the material from a diphtheritic throat can be examined bacteriologically. This length of time is naturally a disadvantage. As is well known, it is customary for observers to wait until *visible* colonies of the bacteria appear upon the surface of the culture medium before a microscopic examination is made. Dr. Ohlmacher has adopted another method, which promises to be successful. A tube of Löffler's serum culture medium, prepared after the modified or American method of rapid coagulation, with a smooth, moist, slanting surface, is inoculated with the exudate from the suspicious throat secured with the aid of the Prudden swab. It is of prime importance that the slanting surface of the culture medium should be both perfectly smooth and moist; and care should be taken not to injure the surface of the serum as the cotton swab is rubbed gently but thoroughly over it. As soon as the inoculated tube is received at the laboratory it is placed in the incubator, the temperature of which is 37·5° or 38° C., where it remains undisturbed for four hours. At the end of this time a thoroughly sterilised platinum loop is gently rubbed over the smooth surface of the culture medium, and then the loop is rubbed into a minute drop of distilled water placed in the centre of a clean and sterilised cover-glass. In this way the material obtained on the loop is washed into the drop of water, and while no visible accumulation will have been observed on the loop an examination of the drop of water with a proper illumination will reveal it to be distinctly cloudy. The drop of water is now evenly spread, by the use of the loop, over a limited area of the cover-glass. This spreading is also of importance, since an extensive application would separate the bacteria so widely as to render subsequent examination difficult. As soon as the film has dried, the cover-glass is passed three times through the flame and then stained. Dr. Ohlmacher prefers methyl-violet as a stain for the diphtheria bacillus. A specimen prepared in this way will, upon examination with the microscope, reveal the diphtheria bacilli, provided the case be one of true diphtheria, or it will show the micrococci of false diphtheria. The number of bacteria in one of these early preparations is, as a rule, not great; but no trouble will be experienced in finding plenty of organisms upon which to base a satisfactory diagnosis if the investigator is thoroughly familiar with the morphological characters of the various bacteria encountered in the culture test.

BOARDS OF GUARDIANS AND NURSING.

IT cannot be gainsaid that the circular issued at the beginning of the year from the Local Government Board upon workhouse administration has been the means of discovering numberless defects in the treatment of the sick poor in many of our workhouses. One somewhat notable instance has occurred in south-west Sussex, and reference has already been made to it in THE LANCET.[1] The absolute necessity of a supply of good nurses was the keynote of the circular, and the board of guardians at the workhouse in question, acting upon these instructions, appointed a head nurse and two assistant nurses from a nursing institution in Surrey. The result was deplorable to the guardians, inasmuch as the condition of things in the infirmary and the other part of the house as brought to light—and very properly, too—by the nurses astounded every member of the board. The visiting committee have since that time gone fully into the matter, and at the meeting of the board last week presented a most exhaustive report. The three nurses had already returned to their institution by the mutual consent of the guardians. "The committee," the report states, "were of opinion that although there was room for improvement, yet that matters had been exaggerated." The report is full of recommendations, and the principal, perhaps, is that the nursing arrangements should be placed under the entire management of the medical officer, it being thought that by so doing a better state of things will prevail in the future. The guardians were very fortunate in having amongst them on the day the report was submitted Mr. J. S. Davy, one of the inspectors of the Local Government Board. He gave the board some very valuable advice. He pointed out that the recommendation of the committee that the medical officer should appoint the nurses

[1] THE LANCET, Feb. 2nd, 1895.

[1] THE LANCET, April 13th, 1895.

was not in any way novel or in any way an ordinary practice at well-managed workhouses. As to the number of nurses, he warned the board against setting up a mere numerical proportion of so many nurses for so many sick; they must have a definition of what was meant by "sick," and of that the medical officer was the only judge. The medical officer's duty was so to place his views that he might discharge his responsibility adequately before the board of guardians, and it was the duty of the board of guardians, Mr. Davy added, not to accept those recommendations blindly, but to most carefully consider them with a very considerable bias in favour of adopting them. Other important points touched upon by Mr. Davy were the desirableness of the board becoming acquainted with the conditions that the nurses who will be appointed will be under to the home or institution from which they come, and the danger of making the workhouse nursing of the sick too attractive, whereby not only would patients come in who would never dream of entering the workhouse, but in time great injury would be done to the voluntary hospitals. Such advice can be taken as coming directly from the Local Government Board, and the many boards of guardians that at the present time are considering this question will do well to take heed of the advice given. The report of the visiting committee is to be placed in the hands of all the guardians for a month's consideration before they are called upon to adopt it in its entirety or with modifications. The latter course will no doubt be carried out.

THE ORIGIN OF CHOLERA IN MECCA.

IN 1893 the widespread prevalence of cholera in Mecca had its beginnings in the cases of certain Turkish soldiers who had arrived from the Yemen, where the disease had for some time past prevailed. This year it has had much the same beginning, Turkish soldiers being again the first victims, and this at a date which precludes all possibility of the disease having been imported by sea from India. The onset of cholera this year has occurred many weeks before the Haj, whereas it generally begins just before or during the period in question, and after the arrival of the caravans by land and by sea. The occurrence of cholera in English pilgrims amid the dirty and neglected conditions of the quarantine island of Camaran has had no connexion with the occurrence at Mecca, for the first cases in the latter city took place whilst the unfortunate pilgrims, who, though healthy, had been compelled to quit the pilgrim vessels *Mohammadi* and *Zobeida* for the hovels or huts of Camaran, were still in quarantine on the island. According to the *Times*, M. Henri Monod, at a recent meeting of the Comité Consultatif d'Hygiène of France, blamed England and her refusal to ratify the Paris Convention for this year's cholera at Mecca; but he should remember that if France would only give up her quarantine notions in the Red Sea, as she has begun to do in the Mediterranean, the way of England to do that which is right would be much clearer. It is quarantine in the Red Sea that endangers the lives of Indian pilgrims and constitutes the main, if not the sole, danger of cholera reaching Mecca by way of the sea. If our pilgrims were only allowed, when certified after a long voyage to be free from cholera, to sail on to Jeddah the danger of cholera travelling by the sea route would practically be at an end. Turkey objects to this; sanitary fees and dues are a matter of importance to her local and even central administration, and it is the proposals submitted by France and her delegates to maintain the quarantine system in this part of the world that largely prevents the adoption of sounder principles. We are not pretending here to endorse all the reserves of Great Britain as regards the Paris Conference, neither do we assume that the altered action of France as to quarantine in the Red Sea could get rid of the major danger of the transport of cholera to Mecca by land routes, whether from the Yemen or elsewhere; but we are convinced that so long as France is guided by those who still cling to old remnants of the antiquated quarantine system under the new name of "observation," so long will the real remedies against cholera be delayed. What is the use of expecting Turkey to spend vast sums on the prevention of cholera in her towns and holy places so long as leading and intelligent nations are always advocating the alternative of quarantine, an alternative which has the immense advantage of helping to fill the somewhat empty coffers of the principal State concerned and those of its local chiefs and officials? M. Henri Monod is, we believe, one of the leading advocates of sanitary measures as such for the prevention of cholera. If he would convert his colleagues to his own views this country would have much less difficulty in uniting with France for the prevention of cholera.

THE IMMIGRATION OF FOREIGN LUNATICS.

IN a letter to the *Morning Post* of May 10th Mr. W. H. Wilkins remarks on the hardship inflicted upon those counties in which are situated ports at which foreign immigrants land in having to maintain those foreigners who are found to be destitute or insane, or both. The landing of foreign insane paupers, who almost immediately go to swell the numbers in our county asylums and have to be maintained at the county's expense, is a matter which should surely be inquired into by the Government, and probably the extent to which the hospitality of this country is abused in this direction could be easily ascertained by the combined action of the Commissioners in Lunacy and the various boards of guardians. Provision is made in the Lunacy Act of 1890 for the return to his own country of any foreigner who is detained in an asylum and whose family or friends desire that he should be removed thither, but there is no provision for the compulsory return of a foreign pauper lunatic. It seems hardly necessary to urge that some such plan should be adopted to meet the case of a foreign immigrant who is found to be insane on, or shortly after, his arrival, and the time of Parliament would be well occupied with the consideration of some such measure of social protection.

HOME OF PEACE FOR THE DYING.

WE have received an appeal on behalf of the Home of Peace for the Dying, to which we gladly give insertion. The history of the institution is briefly as follows. In 1885 a lady, being deeply impressed with the want of any special provision in London for dying men, founded, at her own cost, a small hospital of ten beds in the north of London, which she carried on until the applications so exceeded the accommodation that eight or nine were refused for every one admitted. She then, with the aid of the present council, removed to a large mansion in its own grounds opposite the Swiss Cottage, N.W., which was bought and thoroughly adapted for a large home hospital by a competent hospital engineer. The sum required was £10,000 in all, of which £8000 were raised, and at this very moderate cost Friedenheim was opened, with forty beds, by their Royal Highnesses the Duchess of Teck and the Duchess of York on Nov. 7th, 1892. It is the first and oldest charity in London which is solely set apart for men and women in the last stages of illness. Immediate admission is granted solely on the merits of the case, no letters or votes being required, and all diseases, including cancer, being admitted. The charity is administered with the utmost economy, the foundress and lady superintendent accepting neither board nor salary from the funds. Nevertheless, £2000 are urgently required before July 1st to place the finances on

a sound basis. The dying are surrounded with personal care and with every comfort, the nursing staff being full and efficient. This hospital does not advertise, employs no canvassers or collectors, and is entirely dependent upon the spontaneous support of the public in response to the important and almost unique work it carries on. Many distressing cases but for this charity would die unrelieved, the class it reaches being those not suited to infirmaries and yet too hopeless for admission to, or retention in, the ordinary hospitals. Donations and subscriptions may be sent to the bankers, Messrs. Barclay, Bevan, and Co., 54, Lombard-street, or to Miss Davidson, hon. sec., "Friedenheim," Upper Avenue-road, Swiss Cottage, N.W.

THE CASE OF DR. CORNELIUS HERZ.

THAT the course of justice should be tempered with humanity is generally admitted; yet it is apparent from the letter addressed to us by Mr. McHardy and published in another column that this first principle of social ethics may be overborne by political exigencies. It is not too much to say that the treatment of Dr. Cornelius Herz as an "extradited prisoner" is a reproach to the boasted civilisation of two foremost nations. The unfortunate object of this legal persecution has been for the past two years confined to his bed by a mortal illness, which has been gradually advancing towards its inevitable termination; and yet during the whole time he has been kept under police surveillance and has been practically condemned unheard. Surely no course could be better calculated to hasten the end of a sufferer from advanced cardiac disease complicated with diabetes. Mr. McHardy does not hesitate to affirm that this harsh dealing under legal authority is due to the influence of interested persons, whose reputations would suffer if Dr. Herz regained his liberty. He would hardly have ventured to make such a statement without being in a position to prove its truth; and, this being so, it is certainly surprising that the Government of a free country should have been content to be made the catspaw of a clique, to whose interest it is that the sick man's mouth should be kept closed.

AN OUTBREAK OF MILK-BORNE ENTERIC FEVER IN LANCASHIRE.

MR. EDWARD SERGEANT, medical officer of health to the Lancashire County Council, has recently issued a interesting account of an outbreak of enteric fever which occurred at Great Harwood, and which was traced to the consumption of specifically polluted milk. There were altogether eighty persons, belonging to forty-nine families, attacked, the sanitary conditions of the houses invaded being neither better nor worse than those of other houses remaining free from attack. The water was exonerated from suspicion, since other districts supplied from the same source were not invaded; and there seems to have been no reason to suspect the local pollution of any one water main. So much for the negative evidence. From the positive standpoint it was ascertained that the disease was confined to houses consuming milk from a particular dairy, and that of the houses so supplied no less than one-third was invaded. It was further demonstrated that habitual drinkers of raw milk were attacked more virulently and with greater certainty than those persons who took the milk in tea or coffee. One patient is reported to have attributed his illness to a single glass of raw milk which he took two days prior to his attack. This is certainly a remarkably short incubative period for enteric fever. The question of bovine infection was naturally gone into, and a veterinary surgeon called in to inspect the cattle. The temperature of all the animals was found to be normal, and no eruption on the teats or mammary glands was observed. By carefully inquiring into the distribution of the milk Mr. Sergeant concluded that it must have become polluted during the process of milking, and it eventually came to light that a young woman who assisted in milking the cows, and who looked after the cleansing of the cans, had since and for some time prior to the commencement of the outbreak felt unwell, but as she imagined herself to be suffering from a cold only she continued at work. On being examined by Mr. Sergeant, Mr. John Patchett, the medical officer of health, and the Chairman of the Sanitary Committee, Dr. Cran, the girl was found with a coated tongue, a pulse of 108, a temperature of 100° F., and a few days afterwards rose-spots appeared on her body. Mr. Sergeant is of opinion that the case was probably one of ambulatory enteric fever, and that for a month the girl has been unconsciously capable of imparting the disease. The conditions observed he regards as a relapse, and that it was not improbable that she was instrumental in imparting the specific properties to the milk; and the fact that the decline of the outbreak, allowance being made for incubation, coincided with her withdrawal from the dairy operations certainly lends considerable weight to this view. That the disease was spread by specifically contaminated milk seems to have been demonstrated, and the thesis that the girl in question had prior to her medical examination suffered from enteric fever is one which would explain the outbreak, more especially if diarrhœa was one of her symptoms.

THE CARE OF YOUNG IMBECILES.

ONE of the recognised defects of our highly organised social fabric is the want of due provision for feeble-minded or idiot children of the humbler classes. Parents sometimes have an exceptional partiality for such of their offspring as exhibit mental defects in a minor degree, and encourage themselves with the hope that the backward little one will improve and grow brighter as years advance. When, however, the condition is more pronounced and associated with bodily deformity and a total inability to acquire cleanly habits, a heavy burden is laid upon the parents, and serious injury may be done to other children by constant association with the afflicted one. In London ample and satisfactory means are provided for the treatment of these unfortunates through the operation of the Poor-law, and in some lunatic asylums idiots are admitted at a comparatively early age, but on the other hand there are extensive districts where such measures of relief are unattainable. The necessity for institutions accessible to the imbecile children of the poor has just been impressed on us by a communication from a correspondent in a Sussex village, describing a painful case and anxiously inquiring if there is no means of relieving a respectable labouring family of the task of rearing an idiot girl five years of age, who can neither walk nor talk, and requires more attention than the state of the mother's health enables her to bestow. Our correspondent, who sympathises with the parents, has made inquiries in various quarters on their behalf, but hitherto without result.

HOUSEHOLDERS AND SANITATION.

A QUESTION of equal interest to owners of house property and to their tenants was decided in court last week. The plaintiff, who, acting upon the assurance of an agent, had taken a furnished residence at Sandgate, attributed a sore-throat and other illness afterwards occurring in his family to damp and effluvia due to insanitary conditions. Evidence was adduced for and against this theory, and a verdict was finally given in favour of the defendant. The case, into the merits of which we do not enter, is, as we have said, doubly instructive. It ought to emphasise a necessity always incumbent upon tenants on making a change of residence—namely, that of providing for thorough inspection of all sanitary arrangements in a

new abode. Such forethought, unfortunately, is not too common, and this is the more to be regretted since the services of a qualified inspector can be readily obtained and at small cost, while the consequences of an oversight in regard to this matter may be serious in the highest degree. House-owners on their part will find that it is true wisdom and true economy in the end to test their property periodically, with a view to its timely repair.

THE MEDICAL SOCIETY OF LONDON.

THE annual conversazione of the Medical Society of London, held on Monday last in the society's house in Chandos-street, was exceedingly well attended, and passed off with much *éclat*. At the close of the eloquent and inspiring oration delivered by Mr. Pearce Gould, to which fuller reference is made in another column, a hearty vote of thanks to the orator was carried by acclamation on the motion of Mr. Clutton, seconded by Dr. Ord. The President, Sir W. Dalby, then received the guests and Fellows, and the rest of the evening was spent in the usual pleasant manner of these agreeable unions. A well-chosen selection of music was performed by the Bijou Orchestra during the conversazione.

THE PSYCHOLOGY OF ANÆSTHESIA.

IN our issue of March 23rd we published an interesting letter from Dr. George Wyld dealing with the psychology of anæsthesia. In another column we give the experience of a contributor when under the influence of both chloroform and ether, but we doubt, as we remarked when commenting on Dr. Wyld's letter, whether dreams during anæsthesia have any sound psychological bearing. The average dream is of no more value as a factor in experimental psychology than Dean Swift's famous dream: "'I have desired Apronia to be always careful, especially about the legs.'..... You must know I dreamed it just now, and waked with it in my mouth."[1] It would be difficult, we fancy, to draw any deduction as to mental processes from this, and we think it is perhaps well to think of all dreams, whether induced by drugs or occurring during natural sleep, as coming "through the ivory gate."

DIPHTHERIA IN LONDON.

DIPHTHERIA in London last week showed a fatality higher than in any like period for some months past. But not alone in last week was there increase in the fatal form of the disease, since the deaths have been rising in number from the week ended April 20th, in which they were 30; the totals in the succeeding weeks having been 27, 29, 38, and 41 respectively; and the corrected average for the similar weeks of the preceding decennial period was exceeded in the last two weeks by as many as 9 and 12 respectively. And whilst the deaths have thus increased in number, the per case mortality has shown a similar rise, for whereas in the two weeks ended May 4th the mortality was some 18·6 per cent. of attacks, it was over 26 per cent. in each of the weeks of the last fortnight. Admissions to hospital, which had been in the previous three weeks fluctuating somewhere between 47 and 50 per cent. of the cases, were last week somewhat over 55 per cent., and the actual admissions, which had been 69, 79, and 73 in successive weeks, were last week 84. The Registrar-General tells us that in the week ended May 11th, 4 cases belonged to Poplar, and 3 each to St. George Hanover-square, Bethnal Green, Whitechapel, and Camberwell sanitary areas; and that last week the last-named area had 8 deaths credited to it and Islington parish 4 deaths. In these respective weeks the numbers of deaths occurring at the age-periods one to five and five to twenty, were 20 and 10 and 30 and 7, or at both periods together 79 and 90 per cent. of the whole respectively. In the first of the two weeks there were no fewer than 10 deaths registered from diphtheria in the West Ham district, where the disease seems to be becoming endemic, more particularly in the Plaistow subdistrict. In the London hospitals at the close of last week the number of patients remaining under treatment for diphtheria was in excess of any recorded since Saturday, Feb. 23rd, when the total was identical—namely, 486, the totals of the preceding weeks ended May 11th being 432, 457, and 464 respectively.

[1] Journal to Stella, Letter xv.

"A MATTER OF ETIQUETTE."

UNDER this heading we commented in our issue of April 20th upon the relations existing between Dr. F. J. Waldo and the vestry of St. George's, Southwark. In another column we print an account of the proceedings, up to the present date, from the pen of Dr. Waldo, in the form a special report from him to the vestry. This report has, we understand, been submitted to the Local Government Board.

PREJUDICE AND EXAGGERATION.

ABOUT a month ago our New York correspondent related particulars of two cases of diphtheria, which terminated fatally after the use of antitoxin. Most of our readers must have felt that the cases, as given, were not conclusive in respect to the allegation that the injections were responsible for the result, in spite of the statement of the physician administering them, who is reported to have said that some mistake must have been made in the preparation or bottling of the remedy. Indeed, in one of these cases it is clear that the patient was obviously dying from diphtheria itself when resort was had to antitoxin. The record has, however, been seized upon by a Mr. Ernest Bell, who has disseminated it broadcast in a letter which has been inserted in a large number of provincial papers, and this writer has the effrontery to say that "similar fatalities" are being heard of "from all sides." We venture to affirm that there is no justification at all for such a sweeping assertion, but, on the contrary, that already there is abundant proof that the remedy has had a surprising influence in diminishing the mortality from diphtheria. The attempt to excite prejudice by such exaggerated statements cannot be too strongly reprobated, and we can only express astonishment that they should have been accepted without demur by those who are responsible for the guidance of public opinion.

A SAFEGUARD FOR INFANT INSURANCE.

POLITICAL rivalry finds no place where the object of legislation is a measure so needful, so impartial, and so purely humane as Sir Richard Webster's Bill relating to the insurance of children. The Bill, which was read second time in the House of Commons on Wednesday last, pursues a course very similar to that recommended by the Select Committee on Friendly Societies, whose report was issued in August, 1889. It accordingly provides for the maintenance and encouragement of the mutual benefit principle in effecting insurances, and it limits the sum insured to an average amount almost as low as that of the friendly societies (£2 up to ten years of age). It entails upon medical practitioners the duty of inquiring as to the fact of insurance before granting a certificate of death, and a like service is required of the registrar. It allows a child to remain under the protection of this Act until sixteen years old. The significance of these provisions may be

judged from what we already know of the terms and the methods allowed by various societies not organised by workmen for their mutual benefit. As regards the former we are aware of no limitation, except the inability to pay the required premium; an average of £4 and a maximum of more than twice this sum are not uncommon; while payment in some clubs is made partly in spirits. It is significant also that wilful neglect of infants, according to a recent return, has been shown to be much more common under the non-mutual system.

THE WOMEN'S LIBERAL FEDERATION AND THE MIDWIVES BILL.

THE members of the council of this association have been discussing the Midwives Bill. A resolution by Lady Carlisle was adopted to the following effect:—"That, as the absence of any State classification of midwives leads to the practice of midwifery by unqualified and incompetent women, and is therefore fraught with extreme danger to the lives and health of both mothers and their infants, this council heartily supports the principle of the Bill for the Registration of Midwives which has just passed its second reading in the House of Lords, and urges Her Majesty's Government to give its support to the same." Lady Carlisle argued in favour of raising the standard of midwives to that of sick nurses. To the objection that if the standard is raised the article will become too expensive, she replied that she looked forward to the time when sick nursing, including, we suppose, midwifery, would be paid for out of the rates, and, like education, be free. She crowned this opinion with the argument that child-bearing was a national service. We are getting on. If child-bearing is to be rewarded as conferring a national favour we shall have even more than plenty of it. Another lady, Mrs. Stanton Blatch, said that when medical men were sent for to attend women of the working classes they sent their unqualified assistants. If ladies wish to make the passing of a Midwives Bill impracticable they will do well to multiply such loose arguments and statements as the above.

ON Friday, May 17th, that distinguished cricketer, Mr. W. G. Grace, who is a member of our profession, scored 288 runs for Gloucestershire against Somersetshire. This is in itself a remarkable feat of physical skill and endurance in a man well over forty, but when we consider that this innings was the hundredth occasion of his making a score of 100 runs and upwards the marvel is increased. "Vixere fortes ante Agamemnona." Many another hero has won fame in the cricket field, but we think that this feat of Mr. Grace puts him in a position very far above any of his predecessors or contemporaries, and as the organ of his profession we gladly add our quota to the praises which men of all classes are showering on his prowess.

WE note with pleasure that the University of Cambridge has conferred upon Mr. Francis Galton the honorary degree of Doctor of Science. Mr. Galton is well known as the author of "The Art of Travel," and as having introduced into this country the Bertillon system of identification of criminals.

THE Croonian Lectures of the Royal College of Physicians of London will be delivered at the college, Pall Mall East, on Tuesday, June 18th, Thursday, June 20th, Tuesday, June 25th, and Thursday, June 27th, at 5 P.M. by Dr. Marcet. The subject of the lectures will be a "Contribution to the History of the Respiration of Man."

FOOTBALL FATALITY.—On the 14th inst., while playing a game at East Clandon, a young man aged twenty-one years charged another player and was shortly afterwards seized with illness and died on his way home.

REPORT OF THE COMMITTEE ON PRISONS.

III.[1]

AFTER urging the development of prison industries, and pointing out how strongly the evidence testifies to the benefits derivable by prisoners from being engaged in productive labour, the committee pass on to speak of "Prison Occupation generally"; and they think that there should be a larger supply of books and that reading should not be restricted to one book a week if the prisoner cares to read more, the only difficulty standing in the way being that of distribution, which should readily be overcome. With regard to the general occupation of prisoners other than that devoted to labour, meals, chapel, and other necessary prison duties, the committee hold that everything should be encouraged which tends to elevate the mind so far as it is consistent with regulations necessary for the general order and discipline, much depending in this respect upon the kind of population in a prison and upon the individuals who compose the prison staff. "The monotony of chaplains' work in prisons is apt to produce a mechanical performance of duty, and we think that it would be advisable more often to bring in selected preachers from the outside ..... and we suggest that where it is possible the number of services which the prisoners have to attend should be reduced. This would enable the prisoners to be divided, each half going to chapel on alternate week days." These suggestions appear to us to be wholesome ones and well calculated to relieve the humdrum character of services and make chapel-going less of the nature of a punitory routine. The committee inquired carefully into the rules which regulate "talking" in prisons. Female convicts are allowed to talk for at least an hour a day under proper supervision, and so far as the committee can learn no harm has resulted from it. "We think the privilege of talking might be given after a certain period as a reward for good conduct on certain days for a limited time, and under reasonable supervision, to all long-sentence prisoners, local as well as convict, who have conducted themselves well and who are not deemed unsuitable for the privilege. The present practice of imposing silence, except for the purposes of labour and during the visits of officials and authorised persons, for a period it may be of fifteen or twenty years, seems to us unnatural." In the matter of "Education," the committee think that better results would be obtained by establishing a practice of teaching in classes and by extending tuition to the prisoners generally who, it might be considered, would be the better for it, and not limiting it to prisoners with a sentence of over four months, as at present.

The committee rightly attach great importance to the subject of Classification. It appears that in the prison service a "juvenile" is a boy under sixteen, for whom special treatment is provided by the Prison Act, 1865. Several witnesses were in favour of the total discontinuance of committing this class of offenders to prison; but the committee do not think this is either practicable or desirable. But although they think that in the case of grave offences for which reformatories are not available imprisonment is necessary, they hold that children should be subjected to special treatment and kept absolutely apart from other prisoners. The total number of this class on March 31st, 1894, was only 100, and it might be possible to set apart one of the London prisons for the reformatory treatment of this class. With regard to "young prisoners" the committee speak as follows: "Taking prisoners generally in local prisons, on March 31st, 1894, there were 2228 prisoners, all told, between the ages of sixteen and twenty, and there were 4880 between twenty-one and twenty-nine inclusive. After thirty a very distinct decrease in the number of prisoners proportionately to the population of the same age sets in. Doubtless this decrease is due to various causes, but the fact that it occurs suggests that this tendency towards the abandonment of criminal practices may be strengthened by developing the reformatory side of prison life." The following figures are interesting as showing the proportion of persons convicted for indictable offences per 100,000 of the population of the same age: under twelve, 24; twelve to sixteen, 261; sixteen to twenty-one, 321; twenty-one to thirty, 245; thirty to forty, 204; forty to fifty, 143; fifty to sixty, 92; and above sixty,

[1] Parts I. and II. were published in THE LANCET of May 4th and 18th respectively.

56. In this relation it is to be borne in mind that there is a strong tendency towards short sentences in the case of young offenders, so that the same individuals will appear oftener in the list at the earlier ages. The committee point out that the years seventeen, eighteen, and nineteen appear to be the most fatal in the formation of lasting criminal habits, and that this fact denotes a degree of plasticity which might be made use of in the right direction. They recommend that the age of admission to reformatories should be raised from sixteen to eighteen and of detention to twenty-one, and they urge the establishment of a penal reformatory under Government management on the ground that young offenders would thereby not be compelled to come in contact with the experience of prison life, and would, moreover, receive a good education and be trained in various kinds of industrial work and brought under the best and healthiest kind of moral influence. We are strongly of opinion that such a scheme, brought to bear upon youths at what is the most impressionable period of their lives, would, if properly carried out, be a great power for good in reclaiming many whose predisposition to enter the criminal ranks is largely fostered by the nature of their ordinary surroundings; but it will be useless if it is entered upon in a half-hearted way and upon a niggardly basis, for the machinery calculated to bring about the best results must be well appointed and equal to the work both as regards material appliances and personal capacity of staff.

Proceeding to treat of "Habitual Criminals," the committee recommend that this class of prisoners should be kept as a class apart from others, and they are strongly of the opinion that further corrective measures are desirable for these persons, who are a nuisance to the community, who when at large are responsible for the commission of the greater part of undetected crime, and who, when under sentence, complicate prison management. "We venture to offer the opinion formed during this inquiry that a new form of sentence should be placed at the disposal of judges by which these offenders might be segregated for long periods of detention, during which they would not be treated with the severity of first-class hard labour or penal servitude, but would be forced to work under less onerous conditions. As loss of liberty would to them prove eventually the chief deterrent, so, by their being removed from the opportunity of doing wrong, the community would gain." Under the head of "Habitual Drunkards," the committee say, should be included most prisoners sentenced primarily for drunkenness. They are not criminals in the ordinary sense and should stand by themselves in a special category. The committee go on to say that their inquiry entirely confirms the recommendation of the departmental committee on inebriates that magistrates should have power to commit for lengthened periods habitual drunkards coming before them. "Apart from any places of detention which may be constituted by legislation consequent on the report, we think that persons committed to prison for this offence should be collected in separate prisons, if possible, or otherwise in parts of prisons reserved for them. Special medical treatment should be applied to them, and they should be dealt with as patients rather than criminals."

Special consideration is needed in the treatment of female prisoners who are admitted into prison with infants or who are confined after entering prison. The infants should be in a *crèche* in charge of a warder, the mothers being admitted at fixed time and otherwise employed like other prisoners. If ill-health makes it necessary for the mother to stay with the infant they should be in a hospital cell. Their presence in the ordinary prison destroys discipline, as they will talk; they cannot be punished and in every way they are exceptional cases. The present system of locking up the woman in a cell is unnatural and has bad effects, physical and moral. Wide discretion should be allowed to the matron and medical man as to the removal of the child at nine months of age. In cases where the mother is not satisfied that the child will be cared for it should be either retained in prison or the mother should be released with it. We are glad to have an opportunity of endorsing these comments of the committee on this subject, as they are clearly founded on common sense and natural instinct. To every rule, no doubt, where women of this class are concerned it is not unlikely that some cases of exceptional difficulty may arise, but the general principles formulated by the committee are excellent.

With regard to Unconvicted Prisoners, the committee concur generally with the views expressed by the Royal Commission of 1884 on Irish Prisons, whereby greater freedom and more substantial modification of the severe restrictions were advised, on the ground that these prisoners are confined "for safe custody only." The committee do not think the provision made by the Prison Act of 1877, and insisted upon by the Royal Commission, with the view of their confinement being regulated in such manner as to make it as little as possible oppressive, has been duly carried out; and they think the diet of unconvicted prisoners should be improved. With regard to Debtors, they hold that there seems to be no sufficient reason why they should be more favourably treated than other prisoners. The question of classification is one by which the committee lay great store in their hopes, for "the special classes will be kept together, and it will be easier to apply to them the necessary special treatment. There will be less confusion, because in the case of the young offenders in the penal reformatories the habitual criminals and drunkards, those who undergo considerable periods of detention, will be grouped together, and greater facility afforded for teaching them a skilled trade." In this we entirely agree, and for that reason we have been anxious to set forth the views of the committee at some length. If any alteration in our prison system is to be the outcome of this committee, we feel sure it will have to take the form, not of altering the method of dealing with the inmates of our prisons as at present mixed up almost indiscriminately, but of rearranging and placing upon a more systematic basis of classification the various groups of criminals in relation to the nature and the intensity of their criminality. Such a process is that which the committee appear anxious to initiate, or rather to develop. A great deal has been done in the last thirty years to place the internal management of our prisons on a footing more consistent with modern ideas as to the efficacy of reformatory principles, as compared with mere efforts at repression. The subordinate staff, we are assured, carry out their "most difficult and responsible duties with forbearance and kindness," but from the nature of the circumstances those duties are of necessity very largely of a mechanical and routine description. It is to the higher officials and to the opportunities which may legitimately be entrusted to them that we must look for what we regard as the influential and abiding effects of the educational process, which should more especially characterise the operative activity of prison life, upon the minds of criminals. In this sense a careful and well-considered classification comes to be of vital importance, and the committee have done well in drawing public attention earnestly and forcibly to the necessity for it.

THE VESTRY OF ST. GEORGE, SOUTHWARK, AND THEIR MEDICAL OFFICER OF HEALTH.

(SPECIAL REPORT TO THE VESTRY.)

WHEN I had the honour of being appointed as medical officer of health to St. George's I agreed to obey the order under the Public Health (London) Act relating to the duties of medical officers of health. At the same time I consented to carry out a certain additional duty—namely, "to attend, if required, the sewermen, flushers, and employés during sickness." This agreement I signed under the impression that the particular duty had received the sanction of the Local Government Board, and would, therefore, come under Article 18 Subsection 18 of this order.

Subsection 18 reads as follows: "In matters not specifically provided for in this order the medical officer of health shall observe and excute any instructions issued by us, and the lawful orders and directions of the sanitary authority applicable to his office."

I mention these points because of their bearing on the following circumstances. At a meeting of the vestry on March 12th, 1895, a recommendation was "received" from your works committee to the effect "that in the event of the permanent hands of the vestry being absent from work for two or more days consecutively owing to alleged illness, the surveyor shall notify the medical officer of health, who shall attend the cases in accordance with Section 19 of the terms of his appointment, and afterwards report to this committee." Shortly after

this resolution I received a bundle of medical certificates, duly signed, referring to thirteen employés who lived in various and sometimes in distant parts of London. At the same time I had a verbal request from the surveyor to attend these thirteen cases. In such a proceeding I foresaw great difficulties, such as, for instance: (1) my unfitness for the work, as I have given up active practice for many years; (2) loss of time from regular duties; (3) friction with medical men of the district who were attending the patients in question. On these and other grounds I determined, after consultation with your vestry clerk, to refer the matter to the next meeting of the vestry. This I did on March 26th, 1895. The minutes of that date record that "the medical officer of health stated he was not quite clear as to the intention of the vestry with regard to the resolution passed at the last meeting instructing him to visit the vestry employés during illness." At that meeting I pointed out the serious difficulties that would arise from my visiting the patients of another medical man without his knowledge. The matter was referred back to the works committee for further consideration.

Quoting from the minutes of the latter committee for March 28th I find it written: "The question of the medical officer of health visiting employés during illness referred from the vestry was before the committee." "After some considerable discussion on the matter it was resolved that in any case where the surveyor is of opinion any suspicion is attached to any employé he shall notify the medical officer of health, who shall accordingly visit the men, the vestry undertaking to be responsible for any irregularity thereto." This resolution did not appear in the vestry's printed agenda, but was read on April 9th from the works committee minutes. On that occasion I made a statement to the effect that I begged respectfully to decline visiting the employés, unless I informed the medical man in attendance of my proposed visit. This statement does not appear either in the vestry's printed agenda or in the minutes of the 9th of April. It was, however, read on the 25th of April by the shorthand clerk at a meeting of the works committee, to which the matter had been again referred. At that meeting I asked the chairman kindly to explain to me the exact wishes of his committee. He answered that I was expected to see employés certified as sick without previous communication with the medical man in attendance. In other words, I was to make what are known as "surprise visits." I thereupon observed that both in my own interests and also in those of the parish I could not consent to such a proposal; but that I was willing, with the consent of the medical man in attendance, to see employés suspected of malingering, and that, moreover, I should prefer to meet him in consultation. I also made inquiry of the chairman as to what extent and in what manner it would be possible for the vestry to be responsible for the unprofessional conduct they asked me to be a party to. To this question I received no answer. The committee then resolved that their resolution of March 28th, which undertook a somewhat vague responsibility on behalf of the vestry, be reaffirmed. This resolution, which did not appear on the printed agenda, was duly "received" by the vestry after the reading of the committee's minutes on May 7th. There is no record, however, of the resolution having been "adopted" by the vestry.

On May 14th I received a note from your surveyor requesting me to visit a sick employé, and enclosing a certificate dated the same day, and signed by a doubly qualified medical man. I took the earliest opportunity available of seeing the surveyor personally, and was told that the vestry clerk had reported the case to him on information received from certain members of your vestry. With the surveyor's consent I repeated these words to Mr. Millar (the vestry clerk), who told me in emphatic terms that I had been misinformed. It is now my duty to state to the vestry that the patient in question has not been seen by me for reasons similar to those that have been already given. I take the present opportunity of respectfully asking for a final settlement of a matter that has already occupied a large amount of your valuable time.

Trades unions exist in almost every calling, and the profession is not free from a similar governing principle. It is a first understanding, equal in force to law, that every medical man should refrain from interfering with a patient already under the care of a brother professional unless by his consent, or, better still, in consultation. With no class of men is the observance of unwritten laws more necessary than among medical officers of health, whose duty brings them in constant touch with local practitioners. Any friction between the sanitary authorities and the medical profession would, I feel sure, soon work disaster in a district like St. George's. Without in the least degree wishing to escape from any obligation entered into between your vestry and myself, I would respectfully ask that a final and speedy decision of the matter referred to in this report be requested from the Local Government Board.

(Signed) F. J. WALDO, M.D.,
Medical Officer of Health.

Vestry Hall, St. George's, Southwark, May 21st, 1895.

THE PRODUCTION OF DIASTASE AND OF AN ALCOHOLIC FERMENT FROM FUNGI.

IT is a relief to turn from the study of the micro-organisms which produce disease in man and to consider the important functions of other micro-organisms which we know are instrumental for his good. The training of useful microbes with a view of utilising their latent beneficent powers is, however, a branch of practical study which has hitherto resulted in small success; but there is little doubt that before long certain microbes will rank with other organisms in ministering to the needs of mankind if only the means of directing their movements and action are discovered. The present position of knowledge upon this subject undoubtedly points to the possibility of bacteria being schooled to perform a multiplicity of operations, useful and even industrial, which at present admit of being more satisfactorily and economically carried out. The vexed question of the disposal and utilisation of sewage matters, for example, promises soon to be solved most satisfactorily by bacterial methods, for the experience gained in the remarkable experiments at Massachusetts, as well as those in our own country by Mr. Scott-Moncrieff, teach that there are forces at our disposal in the army of bacteria above, beneath, and around us which when properly engineered will accomplish not only the disposal of a nuisance, as sewage is, but convert it into substances of an innocuous character to man and of a positively beneficial character to plants. Thus under suitable conditions it has been shown that the organic nitrogen, carbon, and hydrogen of sewage is converted by certain bacteria into the simple products ammonia, nitrate, carbonic acid, and water, the very constituents upon which plants thrive and feed, and which are, we might say, their very bread and butter. Illustrations of this kind of the important and useful functions played by microbes in serving the interests of man could be multiplied; suffice it to add that in the present article it is proposed to record but one other example which has recently come to our knowledge, and in which the importance of, and the profit that may accrue from, a study of the habits and requirements of organisms are well brought out. We refer to the recent researches of a Japanese chemist, which were instituted with a view of utilising the property possessed by certain fungi during their growth upon suitable media of exciting both diastatic and fermentative action. The results ultimately obtained promise to become of great commercial importance, while they have also a distinctly interesting bearing upon medicine, not only in bringing to light the eccentricities of organisms and expanding our knowledge of the nature of fermentation, but because one at least of the products—viz., an exceedingly active diastase and probably the purest form of this interesting enzyme ever produced on the large scale—has already its distinct uses in medicine and dietetics. A consideration of these points justifies us, therefore, we think, in devoting some space to an account of this new and important discovery; and at the same time we may append the results of a few experiments we have been able to make in the laboratory with the view of satisfying ourselves in some measure—and therefore, we venture to believe, our readers—as to the validity of the statements made in regard to it.

The discovery is due to a Japanese chemist named Jokichi Takamine, who, while studying with Professor Mills, F.R.S., at Glasgow University, conceived the idea of improving the methods of brewing and distilling—that is to say, he satisfied himself that better converting and fermenting agents were obtainable, and that the tedious, costly, and not over-healthy process of malting was a clumsy and

primitive mode of obtaining a converting agent in the form of the small production of diastase developed at so much sacrifice to the grain treated. On returning to Japan, Mr. Takamine, jointly with Professor Atkinson of Tokyo University, who published occasional contributions on the subject, undertook a long and exhaustive series of studies and experiments on many kinds of microscopic fungus or mould-growth, his object being to find a class of plant containing the two qualities of converting starch in cereals into sugars, and the sugars so obtained into alcoholic spirits. The various ferments and processes of the East, as well as of Europe, were one by one investigated only to be discarded by him; the ergots of rye and other plants whose qualities and powers are well known were not neglected; many kinds of bacteria were studied, when eventually this chemist discovered what he required in the fungus of the species Eurotium Oryzæ, a mycelial of the Aspergillus family whose nature and characteristics were almost unknown. The qualities required and found in this fungus were threefold—that is, the plant having the two qualities he was seeking had to possess another quality, that of being capable of withstanding a high artificial cultivation or development of the two qualities. The best and most practical medium used for growing the seed of this microscopic fungus is common hydrolised wheat bran, on the flakes of which the plant grows with great rapidity, and whilst growing it, to reproduce its own seed, is fertilised with certain chemical salts, and when matured, a process of about five days' duration, he calls it "Taka Moyashi." When grown for commercial purposes it is not fertilised, neither is it allowed to ripen in the same high-class cultivation in this form, the commercial product being known as "Taka Koji."

On examining Taka Koji with a microscope the bran flakes show, after being thirty-six to forty hours in a moist temperature of 80° F., that the roots which spread all over the surface of the bran are literally covered with minute crystals of pure diastase. At the top of the mycelial a small head is formed in which the seeds and pollen are present, while the diastase at the roots is the ferment or agent which converts starch into sugars, the unripe seeds permeated with the pollen, and which may be designated in this condition spores, since they give rise to the ferment or agent which converts the sugars into alcohol and which now takes the place of yeast, as the diastase replaces malt. Strange to say, when both characteristics of the fungus are at their best in this inferior cultivation as described, their properties are at their highest stage of commercial utility; but should the higher temperature and fertilisation be resorted to it is found that the diastase is entirely absorbed from the roots by the seed in the head of the mycelial, which it serves to nourish and ripen, and when the two agents become one, capable of reproducing their genera, it is found to be of little use for either purposes, for converting or fermenting. Mr. Takamine obtains his diastase in an almost pure and concentrated form by the use of percolators, washing the diastase from the bran with water, in which it is soluble, but not so in alcohol, in which it is precipitated. When dried it is of a pure crystalline nature, capable of preservation for any length of time.

The purified diastasic product consists of small, tenacious, gummy particles of a light brown colour and somewhat of the appearance of finely broken shellac; it is almost devoid of taste, but it communicates a peculiar sensation on the tongue, indicative of active digestive properties. An analysis which we made gave the following results:—

	Per cent.
Moisture	15·46
Albuminoids (N=3·65)	22 80
Mineral matters, consisting chiefly of soluble phosphate	16·22
Non-nitrogenised matter, probably carbohydrate...	45·52

On trying a weighed portion with a standard starch solution it was found that over 100 times of its weight of starch was completely converted in thirty minutes at blood heat. Doubtless at higher temperatures it would convert even a much larger quantity, it being stated that under favourable conditions it will digest as much as a thousand times its weight of starch. Hitherto the digestive properties of diastase have been appropriated chiefly by using active extracts of malt, which of course contain a large excess of malt sugar, which in certain cases it is desirable to exclude. The use of the "Takamine diastase" therefore offers obvious advantages on this head. It can be employed, for example, for the malting of milk preparatory to drying, while it can be introduced almost imperceptibly to the taste into beer and other beverages without adding objectionably to the sugary constituents. It can also be compressed into tablets and in that form be obviously useful for a variety of medical and dietetic purposes. The expense of obtaining diastase by the new process is so small that it will be cheaply available for all purposes, including that of bread-making. It is this product of the new discovery, but in a less concentrated and in a less expensive form, which is expected to take the place of malt to a great extent in breweries and distilleries, while the ferment is calculated to replace the present yeasts of commerce in consequence of its greater power, quicker action, and superior keeping qualities.

As already stated, Taka Koji possesses two distinct properties—namely, diastatic property, or property of converting starch into sugar, and fermenting property. It is exceedingly important from an economical standpoint to separate these two properties, as well from the Taka Koji as from each other—a separation that has never before been successfully accomplished on an economical scale—so that when a conversion is desired the ferment property need not be wasted, and when fermentation is desired only the ferment property of the Taka Koji may be employed without waste of the diastatic property. The ferment portion may be directly separated from the dried Taka Koji, in the form of a fine powder, by sifting the Taka Koji. This powder comprises the bloom of the fungus and possesses fermenting properties in a remarkable degree. The residue left after sifting contains the diastatic property, and may be used as a diastatic agent. These two properties may be extracted together from the Taka Koji by soaking or steeping the same in water, thoroughly stirring and then pressing the mass, the diastatic property dissolving in the water, and the ferment part, insoluble in water, becoming detached by attrition and remaining suspended in the liquid. The soaking or steeping, separating and pressing operations may be repeated as often as may be desired, in order to effect a thorough separation. The ferment may be separated from this solution by decantation or filtration. It is, in the form of a fine dry powder, composed of young, immature spores of the mycelial fungus, the colour varying with the different fungi employed. It consists of microscopical spherical cells possessing the property of being transformed into alcoholic ferment cells when submerged in sugar solution under suitable conditions. Fermentation with this "Taka Moto," as it is called, proceeds with remarkable regularity and briskness, the liquid having all the appearance of a weak acidulated solution of sodium bicarbonate, so brisk is the effervescence. On microscopical examination the deposit was seen to consist of budding cells perfectly uniform and regular in shape and like the spores of mucor or some allied fungus, which have pullulated instead of producing a mycelium. Mr. Takamine uses the microscopic fungus eurotium oryzæ with the best results. But other mould fungi belonging to the genus aspergillus and to the genera mucor and penicillium may also be employed. The Moto may be dried and used for all the purposes for which common yeast is at present used. It is claimed that the aspergillus yeast for bread-making will work in half the time required by yeast, and will produce sweeter and more wholesome bread. It is, besides, less liable to become sour, as the Moto itself will keep for almost any length of time in ordinary climates and temperatures. It is further stated that the Moto has the power of mastering all injurious and parasitical ferments it may encounter, and of giving off its ferment cells of a perfectly regular and pure kind.

We may next record the results of a series of experiments which we tried with the view of ascertaining to what extent the aspergillus yeast would work—that is, as to the quantity of spirit it is capable of producing and the amount at which its growth is arrested. It is well known that with ordinary brewer's yeast (saccharomyces cerevisiæ), when the proportion of alcohol produced amounts to 12 per cent. the further growth of the yeast is prevented, and with 14 per cent. fermentation ceases altogether. In this respect ordinary yeast hitherto appeared to excel other organisms in resisting the action of alcohol. It is stated, however, that Taka Moto, which is a mucor yeast, has the power of converting a sweet solution, such as wort, containing sugar sufficient to produce 20 per cent. alcohol, while the best yeasts of commerce will not convert more than about 7 per

cent. of the sugar in a similar solution into alcohol, thus reducing, it is claimed, to one-third the volume of the "wort" to be treated to obtain the same product. How far this is so may be judged from the following series of experiments in which a mash was prepared and converted into wort by Taka Koji, and the resulting sweet liquid fermented with Moto or aspergillus yeast prepared as already described.

In the first experiment, in which a sweet liquid of a gravity of 1075 was employed, the fermentation proceeded briskly, and at the end of the experiment (seven days), the gravity being reduced to 5° under water (1000), the percentage of proof spirit on distillation proved to be 19. On feeding with more sugar, however, the proof spirit rose to 23·86 per cent. In subsequent experiments carried out on similar lines the percentage of spirit rose to 22·71 and 22·38 respectively. On pushing the process further by continuing to feed the aspergillus yeast with ordinary cane sugar a liquid was eventually obtained indicating no less than 37 per cent. proof spirit. The aspergillus yeast cells are capable of continuing their work, therefore, in a liquid containing at least and probably more than 22 per cent. proof spirit. As the spirit increases the liquid becomes clear and the copious growth of yeast at the bottom may be removed, pressed and dried, when it will be found as active as before when placed in a fresh saccharine liquid. The dried aspergillus makes an excellent yeast for bread-making, while it affords an excellent basis also for the production of alcoholic liquors from sweet solutions, especially as, unlike ordinary yeast, it is free from impurities and from those bacteria which induce undesirable changes, giving rise frequently to the formation of acid products in both the brewing of beer and the "raising" of dough in bread-making.

It is obvious from the few experiments we have been able to make that there must be a big future for the ingenious process discovered by Mr. Takamine. The simultaneous production of both a starch-converting enzyme (diastase) and of a ferment which, as we have seen, is perfectly reliable and uniform in its action is a discovery which must have a marked influence upon the brewing and spirit-producing industries. Not only is the process economical, dispensing with the loss of time which is inevitable where the converting and saccharifying powers of malt are relied upon, but it is also stated that the rectified alcohol subsequently obtained is of remarkable purity, being free, it is said, from those higher products which render the ageing and further treatment of spirit obtained in the ordinary way a necessity. Apart, however, from this interesting aspect of the new process, which has been carried out on a practical scale in America, it possesses an interest also from the purely scientific point of view, since it is illustrative, as we stated at the outset, of what can be done by paying attention to the requirements and favourable conditions under which organisms will perform a work the results of which may be eminently useful for domestic, industrial, and even medicinal purposes. In the present instance it is probable that the production of pure enzyme by the simple means above described, which will convert an extraordinary weight of starch, is a fact alone of great interest to the profession, in that it may place in their hands an agent which, as they will readily perceive, may be made instrumental for good in a variety of ways. Again, the production of pure enzyme in large quantities is calculated to afford considerable assistance to those engaged in this branch of research and in the task of unravelling the mysteries surrounding the nature and composition of these remarkably active yet unorganised bodies. When the energy of steam was for the first time utilised it was held to be a remarkable fact, but the latent energy existing in the countless microbes at our disposal must be almost beyond conception. In the remarkable process just described, for example, organisms are so as it were coaxed that they readily produce first a mighty enzyme possessing extraordinary digestive powers, and then a ferment which grows on and on, producing volumes of gas and, *inter alia*, a highly combustible body having those powerful and peculiar properties which mark the members of the alcoholic series.

THE Newbridge Dispensary Committee (Naas Union) met on the 20th inst., and elected Mr. Fleming to the post of medical officer, vacant by the death of Mr. Richard Murphy.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Diphtheria in the Hinckley Urban and Rural Districts, by Dr. S. W. Wheaton.[1]—This report has distinct interest for those who are studying the etiology of diphtheria and allied throat diseases, but as it only records the facts collected during a second and supplemental visit to the infected localities it requires to be read together with the earlier report on the same districts issued last year and dealing with a similar prevalence during 1893. But as far as can be gathered there seems no doubt that, taking the two inquiries together, two different sets of circumstances were met with, and this either consecutively or simultaneously. Thus, in one village or set of villages there was distinct diphtheria; in another set there were groups of cases which seemed to be mere nasal catarrh, and the question arose as to how far this condition of catarrh was related to true diphtheria, and especially how far it tended to be followed by diphtheria. And the result seems to be that villages which at one time exhibited nothing but the minor malady came later to suffer severely from diphtheria—indeed, Dr. Wheaton goes so far as to refer to the prevalence of this form of catarrh as a probable indication of a prevalence of diphtheria yet to come. In the former inquiry affections of the throat and mouth were associated with the nasal catarrh, and some of these seem to have been continuous until the onset of definite diphtheria. On the other hand, the minor throat ailments met with in some places on the occasion of the first inquiry had altogether disappeared, and in such places no diphtheria was found to prevail. These affections of the throat, nose, and mouth have preceded diphtheria, they have coexisted with diphtheria during the earlier stages of that disease, and they have ceased to prevail in districts where they have been replaced by unmistakable diphtheria. The precise significance of these circumstances necessarily involves considerations of distinct interest to the epidemiologist.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6175 births and 3569 deaths were registered during the week ending May 18th. The annual rate of mortality in these towns, which had been 17·5 and 17·7 per 1000 in the two preceding weeks, declined last week to 17·6. In London the rate was 16·5 per 1000, while it averaged 18·3 in the thirty-two provincial towns. The lowest rates in these towns were 12·3 in Croydon, 12·7 in Norwich, 13·1 in Brighton, 13·6 in Gateshead, and 13·9 in Bristol; the highest rates were 22·7 in Bolton, 23·2 in Liverpool, 25·7 in Manchester, 26·5 in Salford, and 28·7 in Preston. The 3569 deaths included 303 which were referred to the principal zymotic diseases, against 305 and 351 in the two preceding weeks; of these 85 resulted from whooping-cough, 69 from measles, 52 from diphtheria, 50 from diarrhœa, 27 from "fever" (principally enteric), 19 from scarlet fever, and 1 from small-pox. No fatal case of any of these diseases occurred last week in Brighton, Norwich, or Huddersfied; in the other towns they caused the lowest death-rates in Croydon, Bristol, and Bradford, and the highest rates in Salford, Bolton, Gateshead, Newcastle-upon-Tyne, and Preston. The greatest mortality from measles occurred in Bolton and Newcastle-upon-Tyne; and from whooping-cough in Leicester, Preston, Salford, and Gateshead. The mortality from scarlet fever and from "fever" showed no marked excess in any of the thirty-three large towns. The 52 deaths from diphtheria included 41 in London, 3 in Leeds, 2 in West Ham, and 2 in Birmingham. One fatal case of small-pox was registered in Liverpool, but not one in London or in any other of the thirty-three towns. There were 27 cases of small-pox under treatment in the Metropolitan Asylum Hospitals

[1] Eyre and Spottiswoode, East Harding-street, E.C.; John Menzies and Co., Edinburgh and Glasgow; Hodges, Figgis, and Co., Dublin. Price 4*d*.

and in the Highgate Small-pox Hospital on Saturday last, the 18th inst., against 37, 34, and 33 at the end of the three preceding weeks; 4 new cases were admitted during the week, against 12, 8, and 6 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1444, against 1469, 1413, and 1438 on the three preceding Saturdays; 185 new cases were admitted during the week, against 132, 107, and 179 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 290 and 247 in the two preceding weeks, further declined to 240 last week, and were 89 below the corrected average. The causes of 42, or 1·2 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Nottingham, Bradford, Leeds, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Liverpool, Salford, and Burnley.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·9 and 18·7 per 1000 in the two preceding weeks, rose again to 21·1 during the week ending May 18th, and was 3·5 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14·8 in Aberdeen and 16·0 in Paisley to 22·5 in Glasgow and 23·4 in Dundee. The 608 deaths in these towns included 24 which were referred to measles, 17 to diarrhœa, 14 to whooping-cough, 5 to "fever," 4 to diphtheria, 1 to small-pox, and 1 to scarlet fever. In all, 66 deaths resulted from these principal zymotic diseases, against 71 and 59 in the two preceding weeks. These 66 deaths were equal to an annual rate of 2·3 per 1000, which exceeded by 0·8 the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had increased from 26 to 30 in the three preceding weeks, declined to 24 last week, of which 7 occurred in Glasgow, 6 in Edinburgh, and 6 in Leith. The deaths referred to whooping-cough, which had been 17 in each of the two preceding weeks, fell to 14 last week, and included 11 in Glasgow. The 5 fatal cases of "fever" exceeded those recorded in any recent week, and included 3 in Edinburgh. Of the 4 fatal cases of diphtheria 2 occurred in Glasgow, 1 in Edinburgh, and 1 in Dundee. The death from small-pox was recorded in Glasgow, where the single fatal case of scarlet fever also occurred. The deaths referred to diseases of the respiratory organs in these towns, which had been 124 and 98 in the two preceding weeks, rose again to 109 last week, and exceeded by 20 the number in the corresponding week of last year. The causes of 45, or more than 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased in the three preceding weeks from 27·0 and 27·4 per 1000, further rose to 27·7 during the week ending May 18th. During the past seven weeks of the current quarter the death-rate in the city has averaged 30·2 per 1000, the rate during the same period being 17·8 in London and 19·3 in Edinburgh. The 186 deaths registered in Dublin during the week under notice showed a slight increase upon the number in the preceding week, and included 5 which were referred to the principal zymotic diseases, against 7 in each of the two preceding weeks; of these, 2 resulted from scarlet fever, 2 from "fever," 1 from whooping-cough, and not one either from small-pox, measles, diphtheria, or diarrhœa. These 5 deaths were equal to an annual rate of 0·7 per 1000, the zymotic death-rate during the same period being 1·8 in London and 3·0 in Edinburgh. The 2 fatal cases of scarlet fever were the first recorded during the present month, and exceeded the number in any week since January last. The 2 deaths referred to "fever" also exceeded the number in any recent week, while the mortality from whooping-cough showed a further decline. The 186 deaths registered in Dublin last week included 26 of infants under one year of age and 46 of persons aged upwards of sixty years; the deaths of infants showed an increase upon the number recorded in the preceding week, while those of elderly persons showed a slight decline. Eight inquest cases and 6 deaths from violence were registered; and 71, or more than a third, of the deaths occurred in public institutions. The causes of 9, or nearly 5 per cent., of the deaths in the city last week were not certified.

HEALTH OF LONDON IN 1894.

The Registrar-General has just issued his annual summary of the mortality statistics for London and for other large English towns in 1894. The death-rate in England and Wales in 1894 was considerably lower than that recorded in any year since the enactment of civil registration in 1837; before that date no trustworthy records existed. The recorded death-rate in London in 1894 was equal to 17·8 per 1000, only 1·2 above the mean rate in England and Wales, and was lower than the London rate in any previous year for which trustworthy records exist. Corrected for difference of age and sex distribution of the population, the London death-rate last year is raised to 18·93, which may be compared with the rate in England and Wales, 16·59. Put in another way, there were in equal numbers living, with equal sex and age proportions, 1141 deaths in London last year to 1000 deaths in England and Wales—the excess of mortality in London being thus equal to 14·1 per cent., against an excess, calculated in the same manner, of 18·5 per cent. in 1893. Among the thirty-three large English towns specially dealt with in the Registrar-General's returns, ranged in the order of their rates of mortality from the lowest, London stands sixteenth in the list for 1894, whereas in 1893 it stood seventeenth. The annual summary contains an international table of mortality in large towns, in which statistics are given for six foreign cities with populations exceeding a million. The death-rates in these six towns in 1894 ranged from 18·2 per 1000 in Berlin to 22·8 in Vienna; whereas in London the recorded rate did not exceed 17·8. The death-rates in the five metropolitan groups of registration districts ranged from 16·2 in the west and north, to 20·6 and 20·9 respectively in the central and east. The summary gives no statistics of mortality at the different age periods except as regards infant mortality. The deaths of infants under the age of one year were equal to 143 per 1000 born alive, whereas the mean rate in the ten preceding years was 154 per 1000; infant mortality ranged in the groups of registration districts from 131 in the north to 158 in the east. Infant mortality, showed, however, a far wider range in the various metropolitan sanitary areas; it was only 86 per 1000 in Stoke Newington and 94 in Lee and Plumstead, while it ranged upwards to 185 in St. George-in-the-East, 186 in St. George Southwark, and 210 in St. Martin-in-the-Fields. After correction for increase of population the deaths in London last year were 11,660 below the mean annual number in the ten preceding years. If we except a marked excess from diphtheria (1146 deaths) and a smaller excess from measles, influenza, cancer, premature birth, and suicide, the mortality from all the principal causes of death in 1894 was below the corrected average. The deaths referred to diseases of the respiratory system were 5000 below the corrected average. Diphtheria was again last year one of the most fatal zymotic diseases in London, and caused a death-rate of 0·61 per 1000, which, although showing a decline from the still higher rate in 1893 (0·74), was nearly double the mean rate in the years 1885–93, which was 0·36. The deaths referred directly to influenza, which had been 2336, 2264, and 1526 in the three preceding years, further fell to 750 last year. One of the most noticeable features in the mortality statistics in the annual summary just issued is the abundant evidence it affords of the low sanitary condition of the group of registration districts representing East London. It has been seen that the death-rate from all causes in this part of the metropolis showed a marked excess. The recorded death-rate in East London, however, probably understates the true corrected mortality, as the birth-rate in this group of districts in 1894 was 36·4, while the highest rate in any of the other groups was 30·7 in South London. The death-rate from the principal zymotic diseases was 3·52 per 1000 in East London, whereas the highest rate from these diseases in the other groups was 2·64 in the South. Diphtheria and measles especially showed a marked excess in East London; and we have already called attention to the excess of infant mortality in this part of London. While there is the most conclusive evidence of continued general health progress in London, the statistics for the eastern and for some of the central districts point clearly to the necessity for more earnest and active sanitary action in those localities.

THE SERVICES.

ARMY MEDICAL STAFF.

Brigade-Surgeon-Lieutenant-Colonel Daniel C. Grose to be Surgeon-Colonel, vice F. H. Welch, retired. The undermentioned Surgeon-Lieutenant-Colonels to be Brigade-Surgeon-Lieutenant-Colonels:—William J. Fawcett, M.B., vice G. Andrew, M.B., retired; William E. Saunders, vice D. C. Grose; William J. Charlton, vice J. D. Gunning, deceased.

INDIA AND THE INDIAN MEDICAL SERVICES.

The Queen's approval of the following promotions among the following officers of the Indian Medical Services appears in the *London Gazette*, May 17th:—*Bengal Medical Establishment:* To be Surgeon-Major-General: Surgeon-Colonel James Cleghorn, M.D. To be Surgeon-Colonels: Brigade Surgeon-Lieutenant-Colonel John Henry Newman, M.D.; Brigade-Surgeon-Lieutenant-Colonel James Charles Gordon Carmichael, M.D. Her Majesty's approval of the retirement from the service of the undermentioned officers is also gazetted:—*Bengal Medical Establishment:* Surgeon-Major-General William Roche Rice, M.D., C.S.I.; Brigade-Surgeon-Lieutenant-Colonel Archibald Cameron, M.D. *Madras Medical Establishment:* Brigade-Surgeon-Lieutenant-Colonel James Smith; Surgeon-Major Donald Elcum, M.D. The following appointments are announced:—Hyderabad Contingent: 2nd Infantry: Surgeon-Captain C. A. Johnston, Madras Establishment, officiating Medical Officer, 1st Lancers, to be Medical Officer. Surgeon-Major P. D. Pank (Bengal), Residency Surgeon in Meywar, to officiate as Civil Surgeon of Ajmere and to the Medical Officer of the Merwara Battalion until further orders. Surgeon-Major H. N. V. Harington (Madras), Medical Officer of the Deoli Irregular Force and of the Haraoti and Tonk Poll Agency, to officiate as Residency Surgeon in Meywar until further orders. Brigade-Surgeon-Lieutenant-Colonel C. F. Pollock, A.M.S., to officiate on the Administrative Medical Staff of the Army, with the temporary rank of Surgeon-Colonel. Brigade-Surgeon-Lieutenant-Colonel R. de la C. Corbett, D.S.O., A.M.S., to officiate on the Administrative Medical Staff of the Army, with the temporary rank of Surgeon-Colonel. Brigade-Surgeon-Lieutenant-Colonel H. T. Brown, A.M.S., to officiate on the Administrative Medical Staff of the Army. Surgeon-Major A. V. Anderson and Surgeon-Major A. W. F. Street, D.S.O., have respectively delivered over and received charge of the office of the Deputy Sanitary Commissioner, Central Registration District. The services of Surgeon-Major J. T. Lewtas, M.D. (Bengal), Officiating Statistical Officer to the Government of India, are replaced at the disposal of the Government of Bengal. The services of Surgeon-Captain G. H. Fink, Civil Surgeon, are placed at the disposal of the Government of India, Home Department. Surgeon-Captain J. C. Morgan, A.M.S., takes over the duties of Staff-Surgeon at Murree from Brigade-Surgeon-Lieutenant-Colonel G. Massy, Civil Surgeon.

NAVAL MEDICAL SERVICES.

The following appointments are announced:—Staff-Surgeons: Samuel Keays to the *Tamar;* James McCardie Martin to the *Colossus;* and Horace Ximenes Browne to the *Melampus*. Surgeons: Edward R. D. Fasken to Sheerness Dockyard; James C. F. Whicher to the *Wye:* Hamilton E. L. Carle to the *Victory;* Percy Lord to the *Tamar;* Percival M. May to the *Ask;* R. J. Mackeown, A. R. Bankart, P. H. M. Star, E. S. Miller, H. H. Pearse, O. Rees, H. A. Julius, C. H. Rock, S. T. Reid, P. W. MacVean, J. F. Hall, H. W. Hull, C. J. E. Cock, J. E. H. Phillips, T. Gibbons, and A. X. Lavertine to the *Victory*, for Haslar Hospital.

VOLUNTEER CORPS.

Artillery: 1st Norfolk (Eastern Division, Royal Artillery): Harold Muir Evans, M.D., to be Surgeon-Lieutenant. *Rifle:* 2nd Volunteer Battalion, the Royal Warwickshire Regiment: Surgeon-Lieutenant W. G. Creswell, M.D., to be Surgeon-Captain. 5th (the Hay Tor) Volunteer Battalion the Devonshire Regiment: Lieutenant John Quick to be appointed Surgeon-Lieutenant. 1st Volunteer Battalion the Lancashire Fusiliers: Surgeon-Captain A. Fletcher, M.D., resigns his commission. 1st Volunteer Battalion, the East Lancashire Regiment: Surgeon-Lieutenant J. M. H. Martin, M.D., to be Surgeon-Captain. 2nd Volunteer Battalion, the East Lancashire Regiment: Surgeon-Lieutenant A. M. Sinclair to be appointed Second Lieutenant. 1st Surrey (South London): Surgeon-Captain T. A. Dagg resigns his commission. 21st Middlesex (the Finsbury): Evan Jones, gent., to be Surgeon-Lieutenant. *Volunteer Infantry Brigades:* North Midland Brigade: Brigade-Surgeon-Lieutenant-Colonel W. Milligan resigns his appointment.

DEATHS IN THE SERVICES.

Deputy-Surgeon-General John Ashton Bostock, C.B. (retired), whose remains were interred at Brookwood on Tuesday last, and who had reached the ripe age of eighty years, was educated at the Charterhouse and at Cambridge. In 1838 he passed his examination for the Membership of the Royal College of Surgeons of England, and four years later was appointed assistant surgeon in the Army, reaching the rank of surgeon-major in 1857; he retired in 1876. He took part in the first Afghan War, which closed in 1842, and was also engaged in the Crimean War. For these latter services he received the medal with four clasps (Alma, Balaclava, Inkerman, and Sebastopol) and the Turkish medal. He was also made a Knight of the Legion of Honour. After his retirement in 1876 he took a special interest in the work of the Metropolitan Asylums Board and actively associated himself with many questions concerning the public weal. Among those who attended the first part of the funeral service, which was held in the Guards Chapel, Wellington Barracks, were Surgeon-Captain Bostock, Surgeon-General Gordon, Dr. Farquharson, M.P., Dr. Bridges, Surgeon-Major Duke, Professor Rucker, F.R.S., Dr. Rogers, Dr. Hare, Brigade-Surgeon Perry, Professor William Smith, Dr. Kingston Barton, Dr. D. Slater, Dr. Church, Sir Edwin Galsworthy, Sir James Paget, and Mr. J. T. W. Macalister (Librarian of the Royal Medical and Chirurgical Society).

Deputy Inspector-General E. Moorhead, M.D., Retired List, Army Medical Department, died at Margate, on the 6th inst., aged seventy-five years. He joined the Army in 1842, became surgeon in 1855, surgeon-major in 1862, and retired with the hon. rank of deputy-surgeon-general in 1868. He served with the 32nd Regiment at the first and second siege operations before Mooltan, including the capture of the city and surrender of the fortress (medal with clasp).

Deputy-Surgeon-General H. Harper, Madras Medical Service (retired), died on the 3rd inst.

Brigade-Surgeon-Lieutenant-Colonel J. D. Gunnings' death at sea on the homeward passage of the *Malabar* is announced. He joined the Army in 1867, became surgeon in 1873, surgeon-major in 1879, surgeon-lieutenant-colonel in 1887, and brigade-surgeon-lieutenant-colonel in 1893.

THE HEALTH OF CALCUTTA AND BOMBAY.

We referred last week, in a paragraph under this heading, to the alleged prevalence of typhoid fever in addition to that of small-pox and cholera, which had been previously reported. It appears, according to the *Times of India* of the 4th inst., that a severe outbreak of typhoid fever has also recently occurred at the Sailors' Home in Bombay amongst the crew of H.M.S. *Cossack* whilst they were being temporarily quartered there in consequence of their ship undergoing repairs in the dry dock. The first case reported was on Feb. 19th, and between then and the 24th there were 11 cases. These were followed by other cases on the 28th of the same month, when the total number reached 22, exclusive of 8 cases of a doubtful or less pronounced character. The deaths numbered 8. From an inquiry that has been instituted and is still being prosecuted it would appear that no sufficient cause has been discovered in the building itself or in its sanitary appliances to account for the outbreak. The result of the investigation, so far as it has gone at present, is stated by our Indian contemporary to have established a strong probability in favour of the theory that milk pollution and the use of polluted watercress have been the causes of the disease in question. We hope that the condition of any filters that may have been in use in the institution will not escape attention. The water-supply is obtained from the municipal mains, and the water at its source is believed to be perfectly good.

TEMPERANCE IN THE ARMY.

The Duke of Connaught, who presided over the first public meeting of the Army Temperance Association, held last week at the Royal United Service Institution, in appealing for funds, made some interesting remarks with regard to temperance amongst the rank and file of our army. Of its immense moral power for good he said there could be no doubt, and when men left the army and returned to civil life, if they had good characters, they stood a better chance of

getting employment. To belong to the Army Temperance Association was a testimonial as to sobriety, and His Royal Highness expressed the opinion that a soldier who was temperate was a better man than a temperate civilian, because a man who had been in the ranks was accustomed to discipline and self-control, whereas civilians were not always in the habit of checking their desires. He agreed with the suggestion that there should be a temperance room in every barracks, and that various handicrafts that would be of use to the men when they left the service might be learnt there in the men's spare time. The report showed there were 128 branches of the association, with a total membership of 8641. Lord Roberts, in a letter, expressed the hope that the present membership would be increased to at least one-third of the total number of soldiers serving with the colours in the United Kingdom, which was about the proportion of men who belonged to the association in India.

THE FRENCH IN MADAGASCAR.

According to the latest mails from Madagascar the troops of the French Expeditionary Force are reported to be suffering to a serious extent from fever and climatic disease, and the sickness has been attended with much mortality. The amount of inefficiency attributable to these causes at this season among the troops on the coast has given rise to some anxiety. It is stated that in one case a company of 150 men is only able to muster 40 fit for service; but, as those acquainted with the effects of malarial disease at certain seasons among our own troops in India are aware, the sickness and inefficiency may be excessive for a comparatively short time only. Unfortunately, however, climatic disease is apt to be followed by a good deal of debility and anæmia and by recurrences of febrile attacks entailing a heavy invaliding list later.

CHOLERA AND THE INDIAN PILGRIM TRADE.

The more the facts are known the more certain it seems to be that the insanitary state of Camaran and the extremely defective state of the arrangements there make it a breeding ground for cholera. Camaran is the quarantine station through which crowds of pilgrims from India and the Dutch colonies have to pass. Large numbers of them arrive there with a perfectly healthy record as far as the voyage is concerned. They are landed at Camaran to pass the customary period of quarantine, and the usual history that follows their arrival is that some cholera cases appear among them within a week afterwards, and the disease becomes epidemic in another week. We concur with the *Times of India* in thinking it a scandal that perfectly healthy pilgrims should apparently so frequently acquire the disease at this quarantine station.

THE NAVAL EXAMINATION.

The undermentioned gentlemen who competed on the 6th inst. and following days at Examination Hall, Victoria Embankment, for appointment as Surgeon in the Royal Navy have been granted commissions:—

	Marks.		Marks.
R. J. Mackeown, M.B. ...	2795	S. T. Reid	2277
A. R. Bankart, M.B.	2735	P. W. MacVean, M.B. ...	2238
P. H. M. Star	2611	J. F. Hall, M.B.	2205
R. S. Miller, M.B.	2539	H. W. Hull	2146
H. H. Pearse	2449	C. J. E Cock	2134
O. Rees, M.D.	2377	J. E. H. Phillips	2116
H. A. Julius	2366	T. Gibbons, B.A., M.B. ...	2114
C. H. Rock	2307	A. X. Lavertine	2104

THE DEATH-RATE IN BOMBAY LUNATIC ASYLUMS.

According to Surgeon-General Turnbull's report on the lunatic asylums of the Bombay Presidency for 1894, the death-rate in these institutions is very high, especially in some of them. In the asylum at Poona it reached the enormous amount of 217·7 per 1000, and in another asylum at Hyderabad it was 125 per 1000. The amount of lunacy in the Bombay Presidency appears to be on the increase.

YELLOW FEVER AT ST. LUCIA.

An outbreak of yellow fever is reported to have occurred recently at St. Lucia. The disease is stated to have attacked twenty-three men of the Royal Artillery, including three non-commissioned officers, and to have caused many deaths.

Sir Alexander Mackenzie and Surgeon-Major-General Cleghorn have joined the Central Committee of the Dufferin Fund in place of Sir Antony MacDonnell and Surgeon-General Rice, resigned.

The hired transport s.s. *Tabor* arrived at Portsmouth on the 10th inst. with sixty invalids for the Victoria Hospital, Netley.

Correspondence.

"Audi alteram partem."

THE CASE OF DR. CORNELIUS HERZ.

To the Editors of THE LANCET.

SIRS,—I think you may be glad to publish the enclosed certificates regarding the present condition of Dr. Cornelius Herz. The originals were forwarded for presentation to the Cour d'Appel in Paris yesterday, when the appeal came up against the recent condemnation, by default, of the accused, who has been an extradition prisoner here since Jan. 19th, 1893, without the possibility of having his case investigated, and precluded by law from giving evidence. The cruel hardship of the situation is self-evident. The unwarrantable assertions cast upon the medical testimony by the Official Advocate in the Paris court has been noticed in the *Times*, while the indecency and falseness of the comments in the lay press of France are as disgraceful as incredible. Authenticated copies of the enclosed certificates were sent to the Home Secretary here, with the covering letter of which copy is enclosed.

I am, Sirs, yours faithfully,

Savile-row, W., May 16th, 1895. MALCOLM M. MCHARDY.

[COPY.]

"5, Savile-row, W., London.

"We, the undersigned, who have previously seen Dr. Cornelius Herz in consultation, have carefully read the report by Drs. Lauder Brunton and Frazer of his condition on April 27th. The increased degeneration of the heart and aorta and the increase of anginal pain is precisely what we should expect from the condition of the patient when we saw him, and from a comparison of the reports made on previous occasions with what we ourselves found. We strongly deprecate any excitement as being most prejudicial to the patient, and consider that it is advisable to spare him even the excitement and fatigue of another examination of his condition by ourselves. It is impossible for him to even leave his bed, much less to travel.

(Signed) "RICHARD QUAIN, M.D.
"WILL. BROADBENT, M.D.
"GEORGE JOHNSON, M.D.
"MALCOLM M. MCHARDY, F.R.C.S."

[COPY.]

"Tankerville, Bournemouth.

"We, in consultation, saw Dr. Cornelius Herz at above address on Saturday, April 27th, 1895. He appeared even weaker than on former occasions, because whereas he had previously raised his head from the pillow to greet us he now lay perfectly quiet without even doing this. He had, however, recovered from the condition of collapse in which he had been some time before. The surface of both legs was cold, but that of the left was the colder of the two. His pulse was 86; respiration 23. The cardiac disease appeared to us to have made some progress since our last examination. The heart was feeble, so that the apex beat could not be felt, but from auscultation it was evident that the heart was dilated. The murmur at the apex indicating mitral regurgitation was louder than it had been on former occasions, and had assumed a twanging character. There was a loud systolic murmur over the aorta and a prolonged diastolic murmur over the sternum, indicating both stenosis of the aorta and incompetence of the aortic valves. How much the circulation is disturbed from this incompetence of the aortic valves is evidenced by the fact that not only was the radial artery seen to be strongly locomotive between the forefinger and thumb, but locomotive pulsation was seen even in the dorsal artery of the foot. There appeared to be also a slight thrill over the aorta which we had not noticed before and which led us to fear that the aorta itself was beginning to dilate. The pain over the heart is now nearly constant and undergoes exacerbations from time to time. The sickness continues also to be very distressing. A specimen of his urine had a specific gravity 1026, acid, slight trace of albumen and 3 per cent. of sugar. (Signed) "T. LAUDER BRUNTON, M.D.
"W. FRAZER, M.D."

[COPY.] "May 14th, 1895.

"SIR,—I have the honour to respectfully, but most earnestly, recall your attention to my letter of Sept. 24th, 1893, regarding the exceedingly painful and cruel circumstances incidental to the prolonged custody of that mortally sick extradition prisoner Dr. Cornelius Herz, for whom it would now seem only too plain that it is deliberately intended to offer no relief otherwise than by death (mental or physical). Rather than accept any responsibility for the blood-guiltiness incidental to inaction in the matter, I herewith enclose to you authenticated copies of the medical certificates recently furnished by Dr. T. Lauder Brunton, Dr. Wm. Frazer, Sir Richard Quain, Sir W. Broadbent, and Sir George Johnson, for use in the Cour d'Appel to-morrow in Paris. There is nothing that I can add to my letter of Sept. 20th, 1893, in pleading the cause of humanity and justice as against policy routine and procrastination. I shall be glad to know authoritatively whether on the death of Dr. Cornelius Herz his family's cup of bitterness is to be further overfilled by an official inquest, as it appears too evident he is to be left to die in custody.

"I have the honour to be, Sir, your obedient servant,
(Signed) "MALCOLM M. MCHARDY, F.R.C.S.

"The Right Honourable the Home Secretary."

"THE MIDWIVES REGISTRATION BILL."

To the Editors of THE LANCET.

SIRS,—This Bill having passed its second reading in the House of Lords, it appears to me, from a perusal of the debate reported in the daily papers, that a question of some importance has been overlooked, and one which, in my humble opinion, has not received its adequate consideration. I trust, therefore, you will allow me to submit to obstetric authorities the point in question in order that it may not escape the attention of the Commons. The question is simply this. How does it come to pass—that is, if the evidence submitted to the Select Committee of the House of Commons and confirmed by that body be correct (viz., that unskilled midwives have been guilty of so much mischief in the past)—I ask how it comes to pass that on the Continent, as in Germany, where the Legislature controls midwives, the mortality amongst lying-in women should exceed our own country, where legislation has not hitherto existed? Mr. Humphreys has attempted a solution of this question by informing us that the conditions of midwifery on the Continent are not the same as in the British Isles, and Mr. Humphreys further points out that narrow pelves exist in Germany in the proportion of about 14 per cent. Now, Sirs, although personally I am no lawyer, I submit that a solemn inquiry of this kind (I mean the legislation of midwives), which for aught we know may some day shatter the whole system of obstetric practice in this country, should be subjected to the most rigid cross-examination, and it is upon this ground that I venture to offer a hypothesis to explain, at least to some extent, the curious fact of the high mortality where registered midwives exist. Now, it is perfectly evident that if the statement about these contracted pelves be correct one of two things must take place—that is to say, violent operative measures, as craniotomy, would be more or less frequently resorted to, or the application of forceps must be a common necessity, and it is certain that in both these cases midwives would give nature the longest possible trial; and hence, the vital powers becoming exhausted, this delay may possibly account to a great degree for the high mortality in Germany, and this is exactly one of the risks—i.e., delay—which we anticipate in the registration of midwives.—I am, Sirs, yours truly,

Queen's-road, S.E., May 20th, 1895. CLEMENT H. SEBS.

To the Editors of THE LANCET.

SIRS,—I have obtained the following opinion on the Midwives Bill from a barrister who helped me on a former occasion. It shows the grave danger now threatening pregnant women and infants; while it will be seen that it threatens to repeal the educational sections of the Medical Acts. I can only repeat that if each practitioner will at once write to the Members of Parliament for his division, earnestly requesting them to oppose the Bill (if it come into the House of Commons), and for their Members to ask some Members of the House of Lords to oppose the Bill, it is not likely it will be permitted to pass. Each practitioner should also ask all the local influential political workers, such as the chairman and secretaries of the local political organisations, to write at once to their Members of Parliament. The Bill was read a second time by the Lords on May 14th, 1895. If some of the practitioners in each city would arrange to go as a deputation to meet their Members at the House of Commons, this would greatly assist our objections to the Bill. A list of Members of the House of Commons will be found at pages 135-147 of *Whitaker's Almanack* and the address—"House of Commons, Westminster, London"—will find them. I shall be glad to hear from any practitioner willing to help.

I am, Sirs, yours faithfully,

ROBERT R. RENTOUL.

73, Hartington-road, Liverpool, May 21st, 1895.

CASE FOR COUNSEL'S OPINION.

1. It is submitted that this Midwives Bill is, in some respects, a more dangerous proposal than either of the previous Bills. The title of the Bill is most misleading.

2. It recommends the repeal of the educational sections of the Medical Acts, as it proposes to empower a "midwife" to practise midwifery and to take entire control of the mother and infant, although she has received only a few months' training; while, according to the Medical Acts, if any person wish lawfully to practise midwifery such person must have studied for at least five years at a recognised medical school, passed the necessary medical examinations, and be registered in the Medical Register. It further recommends the repeal of the Medical Acts by enacting that a "midwife" may practise midwifery without having studied either medicine or surgery: whereas, according to the Medical Acts, if a person wish lawfully to practise any branch or part of medicine, such as midwifery, such person must have studied medicine and surgery as well as midwifery for at least five years and passed the necessary medical examinations. It therefore proposes to revert to the effete and dangerous system of the partially educated and singly qualified practitioner.

3. It will, if adopted, prove dangerous to medical education and to the public, as it proposes to establish two separate and distinct orders of women midwifery practitioners—viz., first, those trained, under this Bill, for a few months only; and second, those educated for at least five years, according to the Medical Acts.

4. It will, if adopted, prove dangerous to medical education, and to the public, as it proposes to establish a back-door entrance to the practice of midwifery; because those who fail to pass the examinations now held by the medical bodies under the Medical Acts will be able to pass the examinations held by the Midwives Board under the Midwives Bill.

5.—It will, if adopted, prove dangerous to medical education and to the public, because there is not a sufficient number of maternity hospital patients with which to train both medical students and pupil midwives in practical midwifery; and also, it would, by proposing to hand over all "normal" labours to the midwife, withdraw these from the newly qualified medical practitioner, and so prevent him from perfecting his knowledge in practical midwifery.

6.—The Bill is very one-sided, because it proposes to exclude men from the Register of Midwives, whereas women are, by the Medical Act, allowed to register on the Medical Register.

7.—The Bill is in no way whatever a protection to pregnant women and infants, because it proposes to allow every woman to continue to act as, and perform all the duties of, a midwife, so long as she does not only use the word "midwife."

8. The Bill is a threatened danger because it does not propose to make it an offence if a registered midwife employs one or several women who are not midwives to act as her unqualified assistants.

9. The Bill is a threatened danger because it does not make it an offence if a registered midwife continue to act as a midwife, even should her name be removed from the Midwives Register for infamous conduct.

10. The Bill is a threatened danger as it proposes to admit at once, and without any examination, all women who say they now act as midwives (some 15,000, the promoters of the Bill say), while it is proposed to continue this "system" of registration, without education or examination, for two years after the Bill passes (see Clause 5).

11. If the Bill became law the midwife could be employed as the legally qualified midwifery assistant of any medical practitioner, dentist, or chemist. It is difficult to see how this would protect the public.

12. The Bill does not make any provision for the supervision of midwives, even when attending natural labours, or any penalty should she neglect to call in medical assistance in abnormal labours.

13. No provision is made for the payment of the medical officers of health who "may" (not "shall") be appointed to supervise midwives (see Clause 12).

14. No provision is made in the Bill for the judging of any midwife accused of being guilty of infamous conduct and for removing her name from the Register.

15. The Bill prevents "any private person" from instituting legal proceedings against a midwife, although by the Medical Act, the Dentists Act, and the Pharmacy Act "any private person" is empowered to enter an action; while by the Veterinary Surgeons Act and its Charter "any private person" with the consent of the Registration Committee of their Council may institute proceedings.

16. The Bill neglects to give a definition to the words "natural labour," as used in Clause 2, and so would give rise to endless trouble and litigation.

17. The Bill does not define the words "without the direct supervision of a medical practitioner." Further, do the words in Clause 2 mean "registered medical practitioners only," or any unqualified practitioner?

18. The Bill does not make it an offence if the midwife conduct not only "natural" but also abnormal labours, abortions, and miscarriages. It further does not make it an offence if the midwife use instruments, or turns or performs any of the various obstetric operations. She will, therefore, be in all respects a midwifery practitioner. She will also be entitled to use the words "midwifery practitioner," accoucheur, &c. She can also ask for and accept fees for the performance of any midwifery operation (see Clause 4, line 10).

19. The Bill does not make it an offence if a midwife visits and supplies medicines to any sick, pregnant, or puerperal woman, or any woman who has aborted or miscarried, or who treats or performs any operation upon any infant. The midwife will therefore be not only a midwifery but also, if not *de jure*, *de facto*, a medical and surgical practitioner, and will be able to ask for and accept fees for so doing.

20. The Bill does not make it illegal for a midwife to vaccinate, and to take fees for so doing; or to include such in the confinement fee.

21. The Bill does not make it illegal if the midwife give a certificate of the cause of death of the mother or infant, or a certificate of stillbirth.

22. If the Bill pass a midwife will be entitled to give expert evidence in court of law as an accoucheur or midwifery practitioner.

23. The Bill does not make it an offence if the midwife compound, or supply, or dispense medicines or even "scheduled" poisons to women and infants.

24. The Bill is not fair to midwives certificated and residing in Scotland and Ireland, as all such practising midwifery and using the title midwife in England may be fined £5 (see Clauses 3 (1) and 18).

25. The Bill is unfair, as it does not make any provision for the Royal Colleges of Physicians and Surgeons in Scotland, and Ireland, or for the Faculty of Physicians and Surgeons, Glasgow, or the Apothecaries' Society, Dublin, being enabled to elect each three representatives to the Midwives Board, while these medical representatives are given to the Midwives Institute.

26. The Bill fails to make provision for the election, by registered midwives, of district representatives to the Midwives Board.

27. The Bill fails to provide any penalty should any person or persons—other than those recognised by the Midwives Board—lecture, examine, and grant a certificate to women which will qualify them to act as midwives.

28. If the Bill become law a registered midwife will possess a "medical diploma," as defined by Section 27 of the Medical Act, 1886.

29. According to the definition of the term "medical corporation" in Section 27 of the Medical Act, 1886, the Midwives Board may claim to be recognised as a "medical corporation."

30. This being so, and as it is not provided against in this Bill, it follows that any medical corporation mentioned in the Medical Acts, and now granting certificates in medicine and surgery, would be entitled, by Section 3 of the Medical Act, 1886, to combine with the Midwives Board, and to recognise the Board's certificate in midwifery as one which empowered the holder to practise midwifery. Therefore the Board's certificate could, along with the medical and surgical certificates, be registered in the Medical Register.

31. To meet the necessities of the case, Clause 2 should be amended so as to define a midwife as "a woman who undertakes to act as a midwifery nurse only, and under the direct supervision of a registered medical practitioner." Clause 4 should be amended in the same way, and penalties should be provided for the punishment of any midwifery nurse who exceeds these duties.

***** We print Dr. Rentoul's letter and communication exactly as we received them, but it appears to us that a "case for counsel's opinion" is not the same thing as "counsel's opinion." We have already expressed our views with regard to this Bill, but, in accordance with the principle "audi alteram partem," we willingly insert Dr. Rentoul's letter and accompanying "case" or "opinion."—ED. L.**

To the Editors of THE LANCET.

SIRS,—In your leading article of May 18th you described "the evils of the existing system, under which any woman, however dirty, intemperate, or ignorant, may call herself a midwife, without check on her practice and without responsibility to any authority"; and you further add, "It is indispensable that such persons should be ejected from the lying-in rooms of the poor," and you advocate the present Bill on these grounds. Allow me to point out that this Bill does not forbid any woman, however ignorant, practising midwifery, providing that she does not call herself a "midwife" or assume any title implying that she is registered under the Act or is "specially qualified" to act as a midwife, therefore any uneducated woman may call herself an obstetric nurse or accoucheuse and practise midwifery without infringing this Act. This is a serious matter, as this Bill is advocated on the ground that the new order of registered midwives will displace the old ignorant midwife, but it now seems that the old midwife will be retained under a new name, and there will be, in addition, a new order of registered midwives.

The result is easily foreseen; the care of the very poor will be left to the old order of midwife with her low fees, whilst the artisan's wife will fall to the lot of the new registered midwife with her higher fees. She will, therefore, come more directly into opposition with the qualified medical man, and attend many who would otherwise have been attended by him, whilst the old order of midwives will still be doing their work. How much better off will the poor be?

I am, Sirs, yours truly,

May 22nd, 1895. REGINALD PRATT, M.D.

THE RATIO BETWEEN FORCEPS DELIVERY AND RUPTURED PERINEUM.

To the Editors of THE LANCET.

SIRS,—In an interesting address by Dr. Glover, the Medical Profession, its Place and Progress,[1] after mentioning the early use of the forceps as one of the great achievements of recent midwifery practice, he (Dr. Glover) goes on to say: "True, we have heard much more of late years of accidents to the perineum." The question thus arises, "Is the more frequent use of the forceps responsible (in any way) for these cases of ruptured perineum?" It would be interesting to have the individual and collective wisdom of the profession on such a very important question. From my own midwifery statistics, extending now over more than a quarter of a century, I unhesitatingly say that, instead of the early and more frequent use of the forceps being responsible for a larger percentage of ruptured perinea, the very opposite fact is the case. I aver, moreover, that the scientific use of the forceps in applicable cases (whether early or late) is in many instances a preventive of such accidents to the perineum. On referring to my note-book I scarcely find a case of ruptured perineum occurring after the use of the forceps, even when forcible delivery has had to be effected, whereas instances are much more numerous where delivery has been naturally accomplished. In fact, when one has the forceps on the head, one is "master of the situation," and very often by careful dallying and manipulation one can prevent such an untoward result. It must be remembered, too (which I do not recollect to have seen noted in any text-book on midwifery), that when a perineum is ruptured it is not so often from the passage of the head but from the shoulders.—I am, Sirs, yours faithfully,

Leicester, May 16th, 1895. W. L'HEUREUX BLENKARNE.

[1] THE LANCET, April 20th, 1895.

CIVIL RIGHTS DEFENCE COMMITTEE.

To the Editors of THE LANCET.

SIRS,—On behalf of my committee I beg to express an earnest hope that you will in your widely read journal give insertion to Mr. Anderson's letter.

I am, Sirs, your obedient servant,

5, Mitre-Court, Temple, E.C., May 22nd, 1895. STAMFORD.

TO THE RIGHT HON. THE PRESIDENT AND MEMBERS OF THE CIVIL RIGHTS DEFENCE COMMITTEE.

MY LORD AND GENTLEMEN,—The leading article in the *National Observer* of May 11th, and editorial comments in that of May 18th, coming with so much authority, coming from a friend, and with every expression of sympathy, seems so likely to carry weight and even to cause doubt amongst those who have so staunchly and so generously supported me, that I ask permission to reply, and would request that with your approval my reply be published. The *National Observer* considers the question of the original judgments of the Trinidad Court "trumpery," and, by inference, appeal to the Privy Council unnecessary; that in Anderson *v.* Gorrie and others, the judgment more than counterbalances the verdict; that the dicta I rely upon are merely "obiter;" that the judgment of the Appeal Court that no action will lie against judges for acts wholly without jurisdiction, or for striking us in the face, is correct; that there is no chance of success in appeal to the House of Lords; that the committee are in error in assisting me in either appeal, and that the proper course is that for my false imprisonment I should be compensated by the State as a measurement of "fairness"—i.e., not as of right.

The "original judgments" involved not only the money value, but (1) my right to earn my living by my profession; (2) my right to recover and enjoy possession of my freehold land, the judgments effectually impugning my title to my whole estate (against these I desire to appeal to the Privy Council, but also against each of the following illegal orders); (3) admitting and inciting the plaintiffs, who were not not paupers, to sue me as paupers, and thus depriving me of my right to my peace; (4) refusing me my right to give evidence, descrediting me in effect worse than a convicted perjurer; (5) compelling me to accept twenty-four hours' notice of trial and thus preventing me from applying for a jury; (6) arbitary refusal of my right to appeal to the Privy Council in matters involving Civil Rights of far greater value than £500; (7) for examining me in Trinidad on a Tobago judgement; (8) committing me to prison in default of bail; (9) exacting "excessive bail" contrary to the Bill of Rights; (10) refusing me the writ of habeas corpus; (11) refusing to accept bail when tendered, and keeping me in prison as though under a conviction for some offence; (12) repeated adjournments, without cause, keeping me a prisoner at large under "excessive bail" for three months. Is there, I would ask the *National Observer*, one of these orders that does not trespass against a right without which liberty or property would be insecure? Is there one not replete with indignity or with danger, as well as with injury? Is there one for which thousands have not suffered? I, at least, have good reason not to think them trumpery. If I had been illegally ordered to be flogged or tortured, and had been flogged or tortured, could it, I would ask, be felt that any reparation would be complete, or ought to be a satisfaction to me, without the obliteration of the shameful order? I am sure all who sympathise with me will understand me when I say that I still hear the key turn in the lock, as I heard it when I entered each night my felon's cell and the key was turned on me; and that I can never be satisfied without the formal and legal obliteration of such a record, and of others not less infamous. I trust this is no false sentiment or improper feeling, but that to generous minds the injuries thus drily enumerated may seem as intolerable to a British subject from British judges as any mere physical torture.

Yet, in the hope to appeal successfully to more practical minds, the minds of any who would advise me to disregard such wrongs and such indignities, and to accept a money gratuity and an apology in lieu of the reestablishment of my rights, and the rights of all British subjects in colonies governed by the Crown, I would ask to be permitted to point out (1) that these judgments (and orders) remain not only on record, but in force; (2) that if I give up my resistance the illegally maintained plaintiffs may not only at once enforce their illegal judgments, but thereby force on prior creditors, and make me bankrupt—sacrificing, at forced disposal, all that I of right possess, completing my "destruction" (vide Coke, Inst. ii., 48), and adding a final humiliation, against which for six years I have successfully struggled. I do not think the *National Observer* was aware of the position, or it would not have thought the question of the judgments trumpery. If I accept a money indemnity, am I to pay out of it these illegal judgments, and thus to give my sanction to all that I have suffered? Or are the plaintiffs to be *concurrently* indemnified? Or are their judgments to be annulled by Act of Parliament concurrently with the vote of indemnity to me? Even this ought not to be done except on a reference to the Privy Council and a judicial decision that the judgments and orders are illegal. Is the compensation to include all the consequential damage done to me by these "State-aided" illegalities?

For myself, I desire only my right, which is to appeal to the Privy

Council and obtain the reversal of these judgments and orders—a part of the oppression of a British colony by British judges,—which ruined many as innocent as I; which corrupted, by encouragement in speculative litigation, whole sections of the people; which criminated great numbers in conspiracy, perjury, and fraud. Between me and this oppression—between a whole colony and this wholesale judicial tryanny and corruption—there intervened, as shown by the Committee in its Interim Report, and by "Juror" in the *Pall Mall Gazette*, nothing but my right of access to a Middlesex jury. Was that, I seek to know, a "*right*" I did and do possess, or was it a providential *error* of Cave and Charles JJ.? It is now admitted that the point is far from "elementary," but this decision (without hesitation) of the Divisional Court is overlooked, and it is said that the dicta I rely upon are "obiter." It is also overlooked that Lord Coleridge left it to the jury to decide, and the jury decided that the acts of the defendant Cook were *not* judicial acts. But the decisions in Molyneaux *v.* De Burgh and Houlden *v.* Smith are *not* "obiter," but are the precedents directly in point. With deference to the *National Observer*, it is, I submit, the decisions against me which are ALL OBITER, no action having ever before been brought against a judge for direct violations of statutes; and I invite the citation and examination of a single case in which the decision in favour of the defendant judge does not rest on the act complained of being within his jurisdiction, or having a colour of jurisdiction.

In this judgment there is, as is known, a further element of doubt, and ground of appeal, in the question of Lord Esher's competency to hear the appeal, there being at the time an action in progress in which he was a defendant (Yeatman *v.* Soden and others) for alleged slander uttered on the Bench in matters *coram non judice*. If this ground is, as I believe, good, illegality is heaped upon illegality, and I have surely most exceptional grounds to ask for help in obtaining justice. If the case is not elementary, there remains—on such grounds there may well remain—more than a chance—a hope of success in the House of Lords.

It is not unknown for the Divisional Court to be upheld—and for the Court of Appeal to be reversed—and not only I, but all who desire a right of remedy against a blow in the face from a judge, or against other crimes if committed by judges, may well hope that the present may be such an instance. To this right of action—the only thing that has served me so far—I naturally cling. If it is finally decided that I do not—that no British subject does—possess this safeguard, the sense of the nation will perceive that a safeguard must be provided. For this safeguard, for compensation and redress, I can with no derogation or sacrifice of right apply to Parliament, when, but not until, it is finally decided that I do not possess it at law; that I never had the right to maintain this action; that, according to a lame and imperfect constitution, not only I, but a whole colony, lay at the mercy of tyrant judges, of a cruel, indifferent, and irresponsible officialism. It will, I think, be clear that if I have this "RIGHT" I should betray myself and my cause were I to accept in lieu of it, even from Parliament, any mere voluntary concession not to be expected by others, in the like case, who could never be so fortunate as to have a verdict on which to base such an expectation.

In these explanations and in the views I have taken I have endeavoured to follow the views of the committee and to adhere to the lines on which it is proceeding; and I hope that I shall obtain its support in the publication of this reply to misconceptions that I cannot but fear will, if left unexplained, prove fatal to the hope of influential and widespread support.

I have the honour to be, my Lord and Gentlemen,
your very obedient servant.

54, Bloomsbury-street, W.C., May, 1895. R. B. ANDERSON.

"A PREVENTIVE OF HYDROPHOBIA."

To the Editors of THE LANCET.

SIRS,—Under the above heading in the current issue of THE LANCET Mr. T. J. Tonkin calls attention to a curious method of treatment prevalent in the Soudan. It may be of interest to mention that a somewhat similar case came under my notice in the province of Shantung, North China, about three years ago. An intelligent native of considerable literary ability called on me to provide him with a remedy, he having been bitten slightly in the hand about six weeks before by a rabid dog. The wound, which must have been very small, had completely healed. I asked what treatment he had already adopted, and he informed me that the dog had been killed, the *heart*—in this instance—taken out and boiled, and that he had eaten it. He was seen again twelve months later, and had been free from any symptoms of disease. In a country where the whole carcase of the dog is considered a delicacy, this method of therapeutics cannot, perhaps, be regarded as strange.—I am, Sirs, yours faithfully,

WM. W. SHRUBSHALL, L.R.C.P., L.R.C.S.E., &c.

Fawcett-street, S.W., May 17th, 1895.

THE SEMILUNAR FIBRO-CARTILAGES OF THE KNEE-JOINT.

To the Editors of THE LANCET.

SIRS,—May I claim a portion of your valuable space to enter a protest on behalf of a pair of structures with which the human knee-joint is endowed, the function of which, mainly as a result of the intrusion of the irrepressible knife of the surgeon, and partly, and in my humble opinion wrongly, on behalf of their possible morphological history, is being minimised and downtrodden!

First, with regard to their history, Mr. Bland Sutton has produced evidence in favour of their origin in connexion with tendons surrounding the joint; but, as far as I am aware, he himself has never advanced this theory as an evidence of their uselessness, and with regard to this point he has much more forcibly demonstrated a similar origin for the internal and long external lateral ligaments, which are generally considered as effective and useful as the lateral ligaments of any other joint. Further, as has always been pointed out, the knee-joint as a whole owes its strength and solidity mainly to the tendons which surround it, bringing these into the closest functional association with the ligaments themselves. The expansion of the quadriceps anteriorly forms the largest and most striking example of the supplementary covering given by tendons to the extensor aspect of a joint capsule, while its connexion to the thin capsular ligament ensures against any dipping in of the synovial lining when the knee is suddenly extended, and its tendon, from its close association with the fixity of the front of the joint, is usually spoken of as the ligamentum patellæ. Posteriorly a similar striking illustration of the utilisation of a tendon as a ligament is offered by the oblique fasciculus of the posterior ligament derived from the semi-membranosus, which places the ligament to a certain degree under contractile power and control when the joint is suddenly extended, preventing the possibility of an instantaneous strain which, if the ligament were an entirely passive structure, would be a source of danger, and also prevents any infolding of the capsule when the position of extreme flexion is assumed.

Secondly, these fibro-cartilages are actually thickened infoldings of the synovial membrane, and with regard to their history a complete transitional series may be traced in different joints of the human body. First let us take the case of the acromio-clavicular joint; here we find the anatomical authors at slight variance as to the presence or not of a fibro-cartilage, the structure in question being a mere infolding of the synovial lining of the upper aspect of the capsule, which varies considerably in size and thickness. In the elbow-joint, as has been pointed out by Professor MacAlister, a miniature meniscus, consisting of an infolding of the synovial membrane, surrounds the margin of the head of the radius. In the shoulder-joint a well-marked meniscus surrounds the margin of the glenoid cavity, here undoubtedly in great part deriving its firm fibres from a tendon, that of the long head of the biceps. In the knee-joint the inter-articular fibro-cartilage as a meniscus reaches its highest development, since it is not a passive ring, but a circular movable cushion, giving elasticity and providing for proper adaptation of the bony surfaces in proportion to the varying areas of the latter which come into direct contact in the different positions of the joint. Here I would refer especially to an additional meniscus, obviously a synovial fold occasionally developed by thickening of the ligamenta alaria; in an instance of this preserved in the Museum of St. Thomas's Hospital the resemblance to a semilunar cartilage was so strong as to suggest to some observers the possibility that it was one of the latter displaced.

Lastly, as to the use of these structures. 1. They do act as buffers, coming into action when the pressure between the bony points in contact is as great as can safely be borne, protecting the central part from injurious pressure just as the tubera ischii are relieved from pressure in sitting on a circular air cushion, and as a single unit in the erect position are as important as an intervertebral disc. 2. They do not "slip forward" when the knee-joint is extended, but are pushed and expanded by the lower end of the femur and the superincumbent weight, and at the termination of extension form an important elastic wedge-check, helping to allow of rapid, complete extension without a sudden strain on the ligaments of the joint. 3. By their firm adaptation to the convex posterior segment of the articular surface of the femoral condyles they enlarge the area against which the head of the tibia plays in internal and external rotation of the flexed joint. 4. They deepen the articular cavity for the femoral condyles in the extended position of the joint, the outer part of the condyles resting on an elastic cushion which fills up the interval which would otherwise exist. Mr. Moullin suggests that the use of the cartilages is to prevent nipping of the anterior part of the capsule. I would only say with regard to this theory that the capsule is, as I have tried to show, provided with muscular attachments such as are seen in other joints to prevent this occurrence; that

the greater part of the anterior aspect is attached to the margin of the patella, which bone moves with the quadriceps, and also tends as a rigid area to prevent folding of the capsule. I may also advert to the fact that the cartilages themselves, which are certainly held between the bones, are invested on both aspects by the synovial membrane. These remarks have been called forth by those contained in a clinical lecture by Mr. Moullin, published in THE LANCET of May 18th, and in a less degree by the fact that during the past session a speaker at one of the London societies gravely suggested that since Mr. Sutton had shown these structures to be in some sense vestigial the knee-joint would be better without them. In writing the above I in no way dissent from the practice of removing broken cartilages, and should always resort to this treatment, but on the other hand I would maintain that the knee-joint without the semilunar cartilages has lost one of its most perfect means of fine adjustment.

I am, Sirs, yours faithfully,

Charles-street, W., May 20th, 1895. G. H. MAKINS.

"KINGSCLERE DISTRICT COUNCIL AND MEDICAL REMUNERATION."

To the Editors of THE LANCET.

SIRS,—My attention has been directed to an annotation in THE LANCET of May 4th under the above heading. The reporters were premature in their statement. The appointment (!) was offered to me on Tuesday, the 14th inst., and respectfully declined. I am, Sirs, yours truly,

Kingsclere, May 17th, 1895. REG. MAPLES.

SMALL-POX IN CALCUTTA.

To the Editors of THE LANCET.

SIRS,—Seeing that in Calcutta the deaths from small-pox for eight weeks only of the quarter do really exceed in the ratio of nearly three to one the number of deaths from the same disease in all the capitals of the world put together for a whole quarter, those in Calcutta proper being 872 and in the other capitals for thirteen weeks 333, I should like to ask someone well acquainted with the city the presumable reason. Is there no legal requirement of vaccination, and are there no public vaccinators? Is the Hindoo and Mahommedan feeling against the operation so strong that it cannot be put in force? It certainly does not say much for the operation or its performance if, in our principal colonial city, the disease exists unchecked to the terrible extent it appears to here. Who is to blame?

I am, Sirs, yours truly,

Gravesend, May 20th, 1895. J. H. GRAMSHAW, M.D.

"ARE APOTHECARIES, OLD OR NEW, ENTITLED TO ADVERTISE?"

To the Editors of THE LANCET.

SIRS,—I am also prompted, like your correspondent "Ethics," to reply to his letter. He accuses the holders of the L.S.A. diploma of being advertisers. I have been associated with general practice in London for the last twelve years, and I can honestly say that the majority of advertising cases that I have come across have not been from holders of that diploma. The new L.S.A. is now as fully qualified as anybody; why, therefore, should he wish to advertise any more than an M.D. Lond.? It appears to me that jealousy has a great deal to do with these attacks on the L.S.A.'s. I am in practice in a large London suburb, and three of the most professional men in that district are holders of the L.S.A. I am, Sirs, yours truly,

May 18th, 1895. JUSTICE.

MEDICAL AID ASSOCIATIONS.

To the Editors of THE LANCET.

SIRS,—I have always been under the impression that THE LANCET would not support in any way any medical aid company or association. Judge of my surprise last week when I beheld an advertisement emanating from the Accrington Medical Dispensary. This is one of those businesses that of late have been the subject of inquiry by the General Medical Council. For reasons best known to themselves the name of "Medical Aid Association" is gradually being dropped by the committeemen of these businesses, and other names substituted, as "Medical Institute," "Medical Dispensary," &c. For some reason, at present unknown to me, I perceive that in this year's list of medical aid associations the statistics relating to Accrington, showing the numbers, profit, and loss, total worth, &c., were not supplied by the secretary. In conclusion, I may mention that an advertisement for an assistant appeared in THE LANCET about three weeks ago from another association.

I am, Sirs, yours faithfully,

May 21st, 1895. DETECTOR.

*** We do not insert the advertisements of medical aid associations or of like bodies if we have any reason to suppose that they act on objectionable lines, but it is obviously impossible to absolutely ensure the rejection of such advertisements. Our clerks have strict rules to this effect which they carefully follow, but unfortunately they are not all "Detectors." The advertisement in THE LANCET of last week did not on its face appear to contain anything to which exception could be taken. If our correspondent will furnish us with the means which he apparently possesses of infallibly detecting the character of every "Dispensary" we shall be greatly obliged to him.—ED. L.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Assizes.

MR. JUSTICE HAWKINS concluded the criminal business of the Assizes on the 15th inst. with the trial of William Miller for the wilful murder of Edward Moyse on Feb. 19th last. The trial ended in a verdict of "Guilty," such being, indeed, the foregone conclusion. This city has been too often the scene of a brutal murder, and this most recent one offers no extenuating circumstance, but several of great aggravation. The deceased was an aged man who on the fatal night offered the prisoner hospitality and a bed for the night. In the morning at an early hour John Needham, a boy aged fifteen, saw the prisoner rummaging the house, and was suddenly attacked by him and wounded. He defended himself as well as he could, and on the prisoner leaving the house he went and found his master (Moyse) wounded and apparently dead. Needham went for assistance, became faint from loss of blood, and was taken to the Northern Hospital, where he remained for some time. Moyse was found to have been dead some time, and from the state of the body it was evident that he had been stunned while asleep and then killed by heavy blows on his head and face with a hatchet. The prisoner was arrested a few days later and identified by Needham. In addition to this direct evidence there was a long chain of circumstantial evidence against which there was practically no defence, the prisoner being quite unable to account for his movements on the fatal night. Mr. Justice Hawkins passed severe sentences on six women who had inflicted grievous bodily harm on a boy who had been a witness against the husband of one of the prisoners. The prisoners were all respectable charwomen, against whom there was no previous charge, but in this their first offence they had been guilty of wanton violence against a boy who had simply done his duty as required by law. He had been left by them on the road in an unconscious state, and he was in the Royal Infirmary for some time after. The judge awarded severe sentences for other crimes of violence, and observed that drink was the exciting cause of many of them.

Fatal Effects of Tight-lacing.

The city coroner held an inquest on the 15th inst. upon the body of a domestic servant aged eighteen years who was attacked on the 11th inst. with pains in the stomach. She was seen by Dr. McCormick, who found her corset so tightly laced that it had to be broken off. She was taken home and treated, but died on the 12th. At the post-mortem examination an ulcer was found in the stomach, which the medical

man attributed to tight-lacing. It is remarkable how this, like other foolish fashions, dies very hard.

Electrical Communication with Lightships and Lighthouses.

The river Mersey has been the scene of many a wreck and many deaths from drowning. These are not due to any lack of courage on the part of the lifeboat men, who are only too ready to risk their own lives. The Royal Commissioners have recommended that the Formby Lightship shall be connected with the shore by means of an electric cable, which will enable the crew to communicate promptly by telephone the exact position of any vessel in distress and so save valuable lives. They will also be able to call for medical aid when this is required.

Hospital Saturday.

Saturday, the 18th inst., was observed as Hospital Saturday in the city. A new departure was made this year by a number of ladies, who paraded the streets from an early hour, collecting contributions from the large number of passers-by. The number of persons who enter the city from all points of the compass every week-day is marvellous, and it is to be feared that only a very small proportion contribute anything to the medical charities. This new arrangement has, therefore, at least something to be said in its favour. The amount accruing from the Hospital Saturday Fund has steadily increased since its commencement in 1870, and a large increase is looked for this year.

Deaths of two Liverpool Surgeons.

Within a very short period two members of the profession who formerly practised in Liverpool have passed away, each having passed the age of fourscore. The first, Mr. Richard Hutchinson, died at Heswall, Cheshire, where he had been living in retirement for some years past. Mr. Hutchinson became a Member of the Royal College of Surgeons of England in 1837, and had for many years a large practice, being also honorary surgeon to the South Dispensary. — The other gentleman was Mr. John Nottingham, F.R.C.S., who was honorary surgeon to the Southern Hospital for many years and had a considerable reputation as a surgeon and general practitioner. For some years past he had lived in retirement at Whitchurch, Salop, where he died.

May 20th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Newcastle-upon-Tyne Eye Infirmary.

AT the annual meeting of this valuable charity, recently held in Newcastle-upon-Tyne, Dr. C. S. Jeaffreson, the honorary house surgeon, called attention in his report to the number of patients treated in the out-door department whom he considered to be "not fitting recipients of charity," many of whom he said were "in receipt of large wages." If the complaint thus publicly made be correct, and it is not by any means the first time that Dr. Jeaffreson has made it, the charity is undoubtedly being grossly abused. The financial statement was not altogether satisfactory, and one would think nothing would tend more to alienate support than the repeated statements by a responsible officer that the charity is abused. The Eye Infirmary is a very perfectly arranged and equipped hospital doing a great deal of excellent work, and it is much to be regretted that it should be made use of by a class for whom it is not intended. Some means of checking abuse at this as well as at other similar institutions should be possible.

Society for the Prevention of Cruelty to Animals.

At the annual meeting of this admirable society, held recently at Newcastle-upon-Tyne, Colonel Coulson said that "a few days ago, while he was in the south of England, a man brought a very beautiful little dog to a friend of his for sale. Enraged because he could not sell it the man took his dog into a wood and there skinned it alive." It seems almost incredible that such a thing could have happened in England, but Colonel Coulson added—"the man was arrested and sent to prison for two months, with hard labour, by the magistrates." This was received with applause by his audience, though why it should have been it is difficult to explain. The punishment was about the same as is not infrequently awarded to some homeless wretch for sleeping out or to a poacher for stealing a hare. Surely penal servitude would not have been too much for such an offence. Colonel Coulson suggested that a Bill should be brought in permitting judges and magistrates to flog men for acts of gross cruelty to women, children, and animals, and he added that he himself would be quite willing to flog such offenders free of expense to the Government. It is quite time such an Act was passed. The argument that the lash would degrade a man capable of skinning a live dog is absurd. How could such a man by any means be degraded? On the contrary, to flog him soundly would be the sole means of appealing to any feeling he possessed which was capable of responding.

Health Exhibition.

The sum of £105 has just been divided by the Mayor among the medical charities in Newcastle-upon-Tyne, the proceeds of the first day's receipts at the Health Exhibition now being held in Olympia. Mr. Engel, the manager of this very successful and interesting exhibition, deserves the thanks of the charities which his enterprise and kindness have benefited.

Newcastle-upon-Tyne, May 21st.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

A Hospital Caravan for Infectious Diseases.

A NOVEL departure in providing for the isolation and treatment of infectious cases has been adopted by the local authority in one of the districts of East Lothian. It consists in having a movable hospital in the form of a caravan. The caravan has four wheels and can be drawn by two horses; it has an air space of 1520 cubic feet, being 19 feet long, 10 feet high from floor to roof, and 8 feet wide. It has double walls, with an intervening space of one and a half inches. One end of the caravan can be dislodged to allow of the vehicle being placed corridor fashion against another. Each van has two beds, and is thoroughly equipped. It is proposed to provide a tent with each van for the nurse or for cooking. The cost of each vehicle is £100. The advantages claimed for this novel method are that the van can be taken to the patient, and that the vans in the several districts can be brought together wherever an outbreak of infectious disease occurrs. The local medical man would have charge, and it is thought that the system will be an economical one. The originator of the idea was Mr. James Wyllie of Pathhead, the brother of the senior ordinary physician to the Royal Infirmary.

Edinburgh Royal Infirmary.

At the meeting of the managers of this institution on Monday a letter was read from the clergyman on the Island of Foula enclosing the sum of £1 5*s.* 6*d.* from the islanders as a contribution to the funds of the hospital. This humble recognition of the services rendered by the Royal Infirmary might be taken to heart by many who have more of this world's goods than these poor and isolated people have. If we mistake not the clergyman not only acts as the spiritual guide of the people but also as their medical guide, and takes charge of them at both ends of life.

Glasgow Samaritan Hospital for Women.

The foundation-stone of this hospital was laid on the 18th inst. by Lord Blythswood. The ceremony was performed with Masonic honours, and was witnessed by a large gathering of the profession and the general public. When completed the hospital will provide accommodation for twenty-eight patients. There will also be a lecture-room for students, and the necessary administrative buildings and nurses' home. The estimated cost of the building is £8000, in addition to which a further sum of £1500 will be spent on furnishing. The present hospital is small and unsatisfactory in many respects, so that the new hospital will be a useful addition to the charitable institutions of the city, and will still further increase the clinical resources of the Glasgow Medical School.

Glasgow University.

One of the earliest and most impressive experiences of the Glasgow undergraduate is the dignified and important bearing of the Bedellus and Janitor as he carries the University

mace in front of the Senatus at some official academic ceremonial. And one of the latest, and certainly not the least pleasing, recollection of college life is the action of the same official as he, immediately after the ceremony of "capping" has been performed, throws the hood, indicating the possession of a degree, over the shoulders of the newly-fledged graduate. These experiences for the past forty-two years have been associated with the genial personality of Mr. Lauchlan Macpherson, and there will therefore be Glasgow graduates in all parts of the world who will be interested to hear that Mr. and Mrs. Macpherson have recently celebrated their golden wedding amidst general congratulations both from town and gown. On the occasion of the anniversary Principal Caird, in the name of the Senatus, presented the worthy pair with a purse of fifty sovereigns, an extra shilling being added "for luck." During the forty-two years of Mr. Macpherson's college experience the whole of the professoriate, with the single exception of Lord Kelvin, has been changed, several of the chairs, indeed, having been vacated two or three times. Queen Margaret Hall, the residence for women students, is to be enlarged by the erection of an additional storey.

Broomhill Home for Incurables.

In December, 1893, a very successful bazaar was held in Glasgow in aid of the funds of this institution, and a sum of £10,000 was raised. Part of this money has been spent in the erection of a new wing to the home, and this was formally opened on the 18th inst. by her Grace the Duchess of Montrose. The new wing provides accommodation for the nurses and servants, with the necessary rooms and offices for the matron. The remainder of the money is to be used partly to meet the annual deficit on the working of the institution and partly to aid the building fund of a new home for imbeciles which it is proposed to erect.

Glasgow Ear Hospital.

The annual report submitted by Dr. Barr at the meeting of subscribers on the 15th inst. showed that sixty-eight in-door patients had been admitted during the year, whilst 1121 out-door patients had been under treatment; the number of operations was fifty-two. As a result of the class examinations, prizes were awarded to Mr. Wm. Lawson and Mr. Archibald Young. The financial position of the hospital is an eminently satisfactory one.

The Sale of Ice-cream.

In the new Police Bill, promoted by the corporation of Glasgow and at present before a committee of the House of Commons, a clause giving power to control the sale of ice-cream and to inspect and regulate the shops in which it is made has been introduced. The necessity for this is manifest when it is considered that there are no less than 286 such shops in the city and that in a large proportion of these the ice-cream is really made in the sleeping apartment behind the shop. Moreover, those engaged in the trade are for the most part foreigners with somewhat primitive notions of cleanliness. In a neighbouring town a serious outbreak of enteric fever was traced to one of these ice-cream establishments.

Glasgow Medico-Chirurgical Society.

The following are the office-bearers for the session 1895-96 of the above society:—President, Dr. Wm. L. Reid. Section of Medicine: Vice-president, Dr. Finlayson; councillors, Dr. James W. Allan and Dr. R. B. Ness; secretary, Dr. Hinshelwood. Section of Surgery: Vice-president, Dr. A. E. Maylard; councillors, Dr. James A. Adams and Dr. J. Walker Downie; secretary, Dr. John Barlow. Section of Pathology: Vice-president, Dr. T. K. Monro; councillors, Dr. L. R. Sutherland and Dr. J. Lindsay Steven; secretary, Dr. R. M. Buchanan. Section of Obstetrics: Vice-president, Dr. Samuel Sloan; councillors, Dr. George Halket and Dr. J. Nigel Stark; secretary, Dr. E. H. Lawrence Oliphant. Treasurer, Mr. Henry E. Clark; general secretary, Dr. C. O. Hawthorne. The society has passed a special vote of thanks to Dr. Walker Downie for his services as general secretary during the past six years.

Hartwood Lunatic Asylum.

This asylum, which has been erected for the Lanark district lunacy board, was opened on the 14th inst. by Sir Windham C. Anstruther, the chairman of the board, in the presence of a number of medical and other gentlemen interested in the care and treatment of pauper lunatics. The buildings are on a very extensive scale and have occupied five years in erection. The medical superintendent is Dr. Campbell Clark.

District Nursing in Sutherlandshire.

To promote the appointment of district nurses in the county of Sutherland a meeting was recently held at Dunrobin Castle under the presidency of the Duchess of Sutherland. A number of the medical men from various parts of the country were amongst the 400 ladies and gentlemen who attended, and the necessary steps were taken to secure nurses, some of whom, it is hoped, will commence work immediately. It was also decided to hold a bazaar to promote the success of the scheme.

May 22nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Telephonic Communication in Dublin.

DUBLIN is so circumstanced as regards the position of its chief hospitals and the dwelling-houses of the medical men, and more especially of the surgeons who constitute their visiting staff who live in many cases some miles away, that the telephone is largely made use of by them. Much dissatisfaction has been caused recently by the failures of the present system, managed as a branch of the National Telephone Company. The snowstorms of February caused an almost complete breakdown, which state of things prevailed for about six weeks, while ever since accidental contacts of wires and failures of communication have been both frequent and annoying. Many letters of complaint have appeared in the daily papers, in one of which, addressed to the editor of the *Irish Times*, a proposal is made by the writer, who signs himself "A Merchant," to establish an independent company. This, he says, has been done successfully by the merchants of Manchester, where a similar state of things prevailed. Such a strong measure will not, I trust, be required here; but it is certainly very annoying to surgeons to find their messages, which are usually few but of importance, lost or delayed in transmission.

The Small-pox Notification Case.

This case still causes much public interest in Dublin. The *Irish Times*, in a leading article on the 18th inst., alluding to a letter from Dr. Cruise, Vice-President of the Royal College of Physicians of Ireland, says: "The letter of Dr. Cruise, as coming from one of the most eminent and universally respected members of the profession, will receive general consideration. 'It is the interest of the public,' he says, 'to support Dr. Hadden, because the recent verdict is a death-blow to notification.'" Dr. Hadden's solicitors, in a letter to the same journal, announce to-day (the 21st inst.) that they have served notice of motion to have the verdict set aside and judgment entered for the defendant, or alternately for a new trial of this action. The action has also occasioned considerable discussion amongst medical men in the north of Ireland; and on all sides there is the utmost sympathy for Dr. Hadden. In Belfast, where the Notification of Infectious Diseases Act has not yet been adopted, those medical men who were in its favour feel that after such a verdict as has been given in the Dublin case they must use every effort to prevent the Act being put in force. The issue of the trial is felt by everyone to be a blow to preventive medicine. The following is a copy of a resolution passed by the council of the Irish Medical Association on May 20th:—

"That the council of the association, upon consideration of all the circumstances set forth in the evidence submitted to the court in the case of Mason *v.* Hadden, is of opinion that the course pursued by Dr. Hadden was such as was imperatively imposed upon him by the Infectious Diseases Act, and that his duty so imposed was discharged with due care and discretion. That the council, therefore, expresses its earnest sympathy with Dr. Hadden in the position in which he has been placed by a conscientious endeavour to perform his public duty; and, furthermore, regard the decision in this case of great importance and fraught with the most serious consequences to the public, as it must have the effect of causing the notification of these diseases to be delayed until they shall have so far developed as to be extremely dangerous to the health of the community."

Sir Patrick Dun's Hospital, Dublin.

The Ierne *fête* in aid of this old-established hospital was opened this afternoon (the 21st inst.) by his Excellency the Lord Lieutenant.

Respirators in Mills.

The attempt by the authorities to force the operatives in

the Belfast spinning mills who are eighteen years of age and under to wear respirators while at work has given rise to a great deal of writing in the public press and to a lively discussion in business circles, all the more as the linen industry is one of the great features of the commercial capital of Ireland. The workers object to these respirators because after being used for a time they become so clogged with dust that they impede respiration, and they get so filthy that they are practically unbearable. I have examined these respirators, which are made of cellular material lined with wool and are fastened round the head with elastic bands, and certainly after being used for a time they become very uncomfortable. When a question was asked in the House of Commons by Sir John Lang about these articles the Home Secretary said they could be washed; but anyone knows that the workers who object to them will not take this trouble, and so the onus is thrown on the mill proprietors, who naturally demur to spending money in this way when they see that their employés are so opposed to wearing the respirators. Then another reason against their use is that the order to wear them does not apply to all, the hacklers and roughers not being included, and practically it comes to this, that these "muzzles," as the workers call them, are simply worn round the necks ready to be slipped over the mouths should the inspectors enter the mills. The general opinion is that it would be much wiser to insist on thorough ventilation of the work-rooms, if necessary by forced draughts, and not to urge the constant wearing of these respirators, a plan which, in order to be carried out, would need all the police and detectives in Belfast to be stationed in the mills, and which those really conversant with the trades carried on in the mills and who are most anxious to do everything to prevent disease look upon as an utterly unworkable and unpractical method.

The Dundalk Workhouse.

At a meeting of the Dundalk board of guardians, held on May 20th, a letter was read from the Local Government Board, in reply to a resolution of the guardians asking for a sworn inquiry into the causes of failure of the extensive sewerage system recently constructed by the board, to the effect that it was not a matter for them to hold an inquiry into. A letter was also read from a gentleman calling on the guardians to stop the passage of sewage into the defective sewer, to empty and disinfect the pipes, and to so dispose of the sewage of the workhouse as no longer to contaminate his grounds or the roadway alongside. The guardians directed that the steps asked by this gentleman should be taken and adopted a resolution, proposed by Dr. MacDonnell, to the effect that the interests of the ratepayers demand a searching inquiry by a competent authority into the failure of the sewer, recently constructed at a cost of £1100, to fulfil the functions for which it was contemplated; that the sanitary state of the house is at present in a deplorable condition owing to the failure of the drainage plan; and that the guardians, being unable to come to any decision without ascertaining where the faults of construction rest and who is responsible for the failure, request the Local Government Board to reconsider their decision not to hold a sworn inquiry.

Technical Education in Ireland.

At meetings of the Newry and Bangor Town Commissioners, held on May 20th, resolutions were passed in reference to technical (including agricultural) education in Ireland and approving of the need of its proper endowment by the Government.

The Royal University M.B. Examinations.

At the recent M.B. examinations of the Royal University of Ireland every candidate in the upper pass division was from the Belfast Medical School, and out of these two were recommended for the further examination for honours.

The Weather.

For the past week we have had very cold stormy weather in Belfast, and there has been a return to winter clothing. It is now milder and rain has set in with a cessation of the wind.

The Battle of the Clubs at Cork.

A meeting was held last Friday for the purpose of making presentations to two secretaries who, as paid officials of clubs, naturally enough offered strenuous opposition to the medical men's organisation. The meeting, though ostensibly convened to give publicity to the presentation, was in reality intended to stimulate the waning enthusiasm of the clubs. The chairman of the meeting is a builder, who can point to the graceful spires of one of the city cathedrals as indications of his prosperity, and it is hardly surprising that the Cork profession should object to his being in a position to procure for a paltry fifteen shillings medical attendance and medicines, not alone for himself, but for his whole family from year's end to year's end. To one of the secretaries he presented what he described as "a magnificent gold watch." To the other he handed a purse of sovereigns, but displayed a reticence in not mentioning the number of gold pieces contained in the purse. After the usual amount of harmless abuse had been indulged in a member took occasion to mention that it was not true that one of the imported medical men intended to leave the city. Be that as it may, it is quite certain that the fact of the Cork medical men objecting to meet the newcomers either professionally or socially is producing its effect.

The Irish Queen's Colleges and the "65" Rule.

The Treasury has with varying success endeavoured to apply the "65" Civil Service rule to the Queen's Colleges. When the late Government was in power communications were sent to the Cork, Belfast, and Galway Colleges to the effect that as far as the application of the rule was concerned those institutions would be regarded as departments of the Civil Service. The corporate body of each College determined to oppose such a startling innovation, and memorials were drawn up pointing out that the Colleges were entirely different from the ordinary public offices under Civil Service control. A clerk entering the Civil Service is generally a boy aged eighteen, whilst a professor at the time of his appointment has usually arrived at mature manhood, and as the pension is in proportion to the number of years served it is evident the professor and the clerk on arriving at the age of sixty-five would be in entirely different positions, the arithmetic being wholly in favour of the clerk. No doubt it could be urged that professors, once they arrive at sixty-five, ought to make room for younger men who possibly are more in touch with the progress of science, but a well-trained mind at that age is quite capable of grasping new ideas, and the matured experience of such men with regard to the internal administration of a college is often invaluable. Besides that, the statutes of the Colleges afford ample opportunities for getting rid of any men who, owing to declining years or from any other causes, are becoming "laggers on the way." Professors may be regarded as specialists in their subjects. Pension the professor of Greek or the professor of natural physiology at sixty-five, and, no matter how vigorous he may be in mind and body, what can he turn to? The pension calculated on comparatively few years' service must necessarily be small; fixity of tenure is gone, and after spending the best years of his life in the service of his college and his country he arrives at a green old age embittered by penury and by the reflection that scholarly acquirements cannot attain their legitimate price. Moreover, the Colleges rely on their Charters. The professors have been appointed by sign-manual of the Queen to hold office during Her Majesty's pleasure—that is to say, they assert, as long as they are capable, willing, and able to discharge the duties of the high offices with which Her Majesty has entrusted them. The Irish law officers of the late Government on being appealed to decided that the "65" rule could not apply to the Colleges. The English and Irish law officers of the present Government hold that it does. The Chief Secretary referred the "policy" of the application of the rule to the Colleges for the consideration of the Lord Chancellor of England, and that high functionary has recently decided against the contention of the Treasury. The most recent development has been that a Treasury committee, of which Lord Playfair is a member, has expressed a desire for a conference with the three Presidents and one or more professors of the Colleges for the purpose of discussing the whole subject. Meantime President Moffit of Galway College, who was dismissed under the application of the rule, has been reinstated, and Professor England of Cork has a very substantial claim against the Government, as his chair has been transferred to another.

May 21st.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Italian Hygiene and the Travelling Public.

THE tourist season now closing has in point of numbers been inferior to none of its predecessors. Nay, if the spring weeks only be considered, the influx of *forestieri* has been

larger than has for many years been known. This is a great fact for Italy. According to an estimate arrived at some three years ago by the English-speaking Consuls, the annual sum poured into the country by the British, colonial, and American visitors, migratory or resident, is not less than £20,000,000 sterling, almost a third of the public revenue. This money, moreover, is contributed in gold, for which Italy gives an equivalent in her depreciated paper currency. Any cause which lessens this contribution from without is looked upon by Italians as a public calamity, the incidence of which may be realised by a single concrete example. Some years ago there was, without adequate foundation, it is true, a fever scare in Tuscany, which acted as a deterrent on the foreign visitor. In Florence, at the great picture gallery of the Uffizi, the receipts for entrance money (1 fr. per head) were in the first three months of the year 16,000 fr. less than in the corresponding period of the year before. In other words, Florence had 16,000 fewer visitors. How disastrous this proved to the city and its inhabitants may be estimated by the anxiously sustained endeavours since made to raise its sanitary credit and to attract, not repel, the stranger within its gates. These endeavours have not been without their reward, and rarely indeed has Florence, or for that matter the great artistic or otherwise interesting centres, entertained a goodlier number of visitors than has been the case recently. It is only when the tourist leaves the well-worn track, where the demands of civilisation in food, drink, lodging, drainage, and other primary conditions of health are fairly well responded to, that he feels the essentially mediæval character of the Italian *modus vivendi*. In time, no doubt, the rural standard in these matters will be brought up to the urban; but meanwhile the foreign resident in the smaller provincial towns has to put up with a great deal in the daily life that is rough, not to say revolting. To go no further than the food, he must be constantly on his guard, and would do well to practise the safe rule of requiring as little as possible beyond what the natives themselves consume. Take them out of their limited round and the traveller will simply be courting disappointment, or worse. Let me give an artist's experience. This gentleman was on a sketching tour in the picturesque towns on the Roman-Neapolitan frontier, and he had provided himself with introductions to the syndics of three or four *paesi*. These functionaries found lodgings for him; but, in each case, he had to leave next day, having spent a sleepless night in paying an involuntary blood-tax to myriads of bed-fellows. At length he settled down in an unpretending *locanda* in the Sabine country where he could indulge "tired nature's sweet restorer" unmolested. But the daily food was the difficulty. Beyond eggs and poultry mine host could give him little or nothing, though he was persistent in his demands for the chop of British partiality. One day, however, he found before him at *colezione* a smoking dish of mutton cutlets, but to the surprise of the landlord he sent them hurriedly away. "How is this?" was the remonstrance, "you have been asking this week past for mutton, and when with great difficulty we procure it for you you won't look at it." "Yes," was the quiet rejoinder, "but I saw the sheep lying dead on the road this morning." Indeed, you are seldom sure of the origin or "previous history" of the viands set before you in such places, and to judge from the instances of ptomaine poisoning from meat of more than dubious quality even the greater cities are not above suspicion. We far too often read of horseflesh, and that of an unsound kind, being impounded by the sanitary officers at the butchers' shops or in the sausage manufactories, while the seizure and destruction of mushrooms unfit for consumption is constantly recorded in the police columns of the newspapers. Poisoning from the use of non-edible fungi is one of the most frequent causes of disease and death in the inland districts and even in the towns; in the former, indeed, the local *dispensi* kept up by Government for the pharmaceutical service of the countryside are constantly running short of the regulation antidotes. Here, again, we come upon another drawback to the safe residence of the foreigner in Italy. The native pharmacists are not so particular about the renewal of their stock as more civilised usage requires them to be; and, in point of fact, the Government inspectors, whose duty it is to see that the quality of the drugs sold to the public is in all respects "up to date," have been recently reminded even in the lay press (particularly of Southern Italy) that greater vigilance on their part is eminently required. Still, unsatisfactory as in many cases the food and drink and drug supplies of Italy are apt to be, vast strides in the sound sanitary direction have been made, even in the few years since Bertani's hygienic code has become law. This, if rigidly enforced, as I am happy to say it generally is, coupled with a steadily growing conviction in the landlord class that "honesty is the best policy," and that the English-speaking *clientèle* after which it hankers is mainly to be conciliated and extended by attention to the decencies of civilisation, will gradually bring Italian life up to the higher European standard and find its reward in a larger and steadier proportion of that "foreign import" which (as already indicated) brings into the kingdom even now about a third of its annual revenue.

Organised Quackery.

One must have been a resident in rural Italy to appreciate the difficulties with which the profession has to struggle. Prominent among these are the "falsi sanitarii" (unqualified practitioners), who are as prolific as unsound mushrooms, particularly in the southern provinces. The Questore of the "Ordine de' Sanitari" (the Order of Duly Qualified Practitioners), whose surveillance extends over Naples (city and province), has just had to issue the following: "The irregular physicians and surgeons in Naples, at a meeting assembled to devise measures for eluding the action of the authorities in suppressing their illegal 'industry,' have resolved 'no longer to sign prescriptions, or only to sign them illegibly; to affix a date much anterior to that at which the prescription is penned or not to date it at all.' Such tactics (proceeds the Questore) I make known to the public, so as to put it on its guard and to make it insist on exacting from every physician, little known or not known, his signing his prescription clearly, and his affixing to it the proper date. In case of doubt the public is requested to forward to the secretary of the 'Ordine de' Sanitari' the prescription in question, when the Questore will at once institute inquiries. The Questura (agency of the 'Ordine') has drawn up a list of the pharmacies resorted to by unqualified practitioners, where their prescriptions are compounded. These 'pharmacies' are now being watched and made known to all associates of the 'Ordine de' Sanitari' in order that they may assist in accumulating the evidence required by the authorities. Associates are further requested not to relax their vigilance over these 'pharmacies' and to continue to inform the Questura of whatever new establishments of the kind the unqualified practitioners avail themselves of. Their information may be anonymous. The officials of the 'Ordine' will make themselves responsible for the action taken." Ignorance on the part of the population where every one in three is "analfabeto" (unable to read or write) explains the success of these irregular practitioners, belief in witchcraft still prevailing in many of the southern provinces, and the miracle-monger exercising his *métier* too often with the connivance, or at least without the remonstrance, of the lower clergy. Moreover, a better system of medical instruction and graduation must be introduced before the duly qualified practitioner can always count on that respect which is due from the public to the profession. No man has seen more clearly, or more poignantly deplores, the defects and results of that system than Dr. Baccelli. In his capacity as Minister of Public Instruction he has much in his power in the way of reform or of wholesome innovation, and his promised Bill for the Amendment of the Italian Universities, to be laid before Parliament after its reassembling, is awaited with interest by every faculty—by none more keenly than the medical.

Typhoid Fever in the Romagna.

The return-wave of tourist travel which, proceeding from Naples and Rome, is apt to diffuse itself over the interesting towns on the Adriatic seaboard from Ancona to Venice should be warned against the insanitary condition of those centres of population, particularly in the matter of water-supply. I hear from Cesena that within the month now passing fevers of a distinctly typhoid character, often attended with hæmorrhage from the bowels, have been epidemic in the town and neighbourhood. The hospital is full of such cases, children being the most often affected. Sanitary investigation has at once traced the disease to the water, the pollution of which is scarcely more marked in Cesena than in other places in the Romagna. The authorities are enforcing the use of water previously boiled in all the schools, and they are supplying it gratuitously

to those and similar institutions, while an urgent appeal is made to the heads of households to observe this well-timed precaution. By order of the same authorities those certified as having succumbed to the disease are buried "senza accompagno funebre" (without funeral accompaniment), a regulation which furnishes some notion of the alarm caused by the epidemic.

May 18th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Supernumerary Spleens.

DR. ALBRECHT, assistant to Professor Weichselbaum, exhibited at a recent meeting of the Vienna Medical Society an anatomical preparation which contained an enormous number of Spleens. Cases of supernumerary spleens are not rare, but in this instance the number of them is extraordinary. In the usual situation there is a spleen the size of a walnut, with the splenic artery and vein in their normal position. The other spleens are dispersed not only on the mesogastrium, but also on the peritoneum, as, for example, on the hepatic ligament and on the convexity of the liver; the largest number were found on the mesentery and transverse mesocolon; there were more than thirty in Douglas's pouch. All these formations are characterised by red colour and pulp, and that they are composed of spleen tissue was proved by microscopical examination. Each spleen is enclosed in a separate capsule and covered by the peritoneum. Professor Toldt sought to explain this abnormality by a reference to comparative anatomy and embryology. Comparative anatomy, however, offers no analogy in the series of vertebrates, the spleen being generally developed in the mesogastrium. Appealing to embryology, Professor Toldt supposes the epithelium of the cœlom to form the splenic tissue. The case may be explained on the theory that, besides the mesogastrium, other parts of the cœlom may be capable of forming splenic tissue Professor Weichselbaum suggested an investigation with a view to discover whether these dispersed spleens had performed the function of a normal spleen, and if they had not, then what organ had been the vicarious one. As it is in the spleen that formation of the white and destruction of the red blood-corpuscles normally take place, it is interesting to note that in this case the lymphatic glands of the retro-peritoneal space were increased and that the spleens contained a considerable aggregation of pigment, due to the imperfect removal of the pigment resulting from the destroyed red blood-corpuscles.

Multiple Thrombosis.

At the same meeting Dr. Gruss exhibited a case of Multiple Thrombosis following influenza, nothing similar to which has hitherto been recorded. The patient, aged forty-one years, fell ill some six months ago with symptoms of influenza. Pleurisy with effusion occurred on the left side. At the end of the first week of the illness a tense and painful tumour appeared under the left costal arch, suggesting by its characteristic furrows and other circumstances a tumour of the spleen. On Jan. 9th sudden thrombosis of the left cephalic vein occurred, together with swelling of the upper arm and neck, and after a few days there was thrombosis of the thyroid vein. Then thrombosis of the pharyngeal veins appeared, and at the present moment the veins of the mucous membrane of the mouth resemble an injected preparation. The urine contained red blood-corpuscles and 0·5 per cent. albumen. In the absence of any precise symptom of nephritis that appearance is to be explained by thrombosis of the kidney. The attack of influenza, in fact, caused universal thrombosis, and the tumour of the spleen was due to thrombosis of the splenic vein.

Antitoxin Treatment in Croatia and Sclavonia.

From August, 1894, to January, 1895, antitoxin injections have been employed in 428 cases, of which 382 recovered and 46 died, the latter chiefly among the severe cases or those where injection had been made after the lapse of a week; the mortality therefore amounted to 10·8 per cent. Of 826 children treated with prophylactic injections, only 17 fell ill, and among those there was but 1 death, equivalent to a mortality of 0·2 per cent. The average mortality from diphtheria since the use of antitoxin has therefore fallen from 65 per cent. to 10·8 per cent.

A New Anti-syphilitic Remedy.

Dr. Rille, assistant to Professor Neumann, has published his observations upon the new remedy, hæmolum hydrargyro-iodatum. This is one of Kobert's blood preparations, containing 13 per cent. of mercury and 28 per cent. of iodine. Hæmol, its basis, is obtained by mixing neutralised blood of warm-blooded animals with water and zinc powder. It is to be preferred to all other mercurial preparations, for it produces but trifling salivation without any of the fetid pus of mercurial stomatitis. A case of periostitis of the parietal bone and of the spinous processes of some dorsal vertebræ healed under its use within thirteen days; and a case of perforation of the hard and soft palate was decidedly benefited. As it contains iron it possesses also tonic properties, and may be regarded as a very valuable remedy against all cases of syphilis complicated with pallor or scrofula. The dose is 0·8 gramme (= 13 grains) daily.

Professor Dittel.

This Nestor of Austrian surgeons celebrated his eightieth birthday on May 15th. It is worthy of mention that during the last five years he has performed 500 lithotomies and has published some important works, such as "Treatment of Recto-vaginal Fistula," and "Foreign Bodies in the Urinary Bladder" (together with a new operative method). The octogenarian professor is an entirely self-made man, who has obtained his honourable position by energy and indefatigable pursuit of knowledge.

The Obstetrical Congress.

The Sixth Congress of the German Obstetrical Society will take place at Vienna on June 4th, 5th, and 6th. The two subjects to which special attention will be directed are Endometritis and Rupture of the Uterus.

May 19th.

Obituary.

JOHN CRERAR, M.R.C.P., L.R.C.S., L.M. EDIN.

BY the death of Mr. Crerar the town of Maryport in Cumberland has lost its oldest practitioner. He was of Scottish origin, and his first introduction to the district was about thirty years ago. The industry of West Cumberland was then entering on its prosperous years, and he rapidly acquired an extensive practice, which was at one time among the largest in the north-west of England. Few men have lived a more busy life or have been more devoted to incessant work. He was, moreover, a man of very considerable linguistic attainments, being a good classical scholar and well read in Celtic literature. His was no mere superficial knowledge, but was that of the cultured philologist, kept up to date and in touch with modern scientific developments. He was an excellent speaker and took a prominent part in public matters both on religious and secular questions. He was a firm and unchanging friend, a fearless but just and honourable controversalist, and a man of purest life and noblest aims. His appearance denoted marked individuality. An ample forehead, bushy eyebrows, clear grey eyes, a bearded face, a spare, slightly stooping frame, and a quiet, thoughtful way of speaking all combined to denote a self-reliant and intellectual character. Mr. Crerar was an original member of the Border Counties Branch of the British Medical Association, and filled the offices of president and vice-president. The treatment of influenza interested him deeply and formed the subject of papers contributed by him to THE LANCET.[1] His last illness was the result of a cardiac breakdown, and the end came on May 11th, bringing to a close in its sixtieth year a life for which a considerably longer duration might have been anticipated.

ALFRED WILLIAM STURDEE, L.R.C.P. LOND., M.R.C.S. ENG.,

OF H.M.S. "HOOD."

IT is very painful to have to record the death of this young naval surgeon from drowning while bathing at Gozo, near

[1] THE LANCET, Dec. 19th, 1891; Feb. 3rd and 10th, 1894.

Malta. His name will be familiar to the teachers of the London Hospital and to the *alumni* of that school who qualified three or four years ago. Mr. Sturdee's career was entirely pleasing and promising. Born at Sheerness on Nov. 27th, 1869, he was the son of the late Mr. Alfred Barrus Sturdee, Chief Constructor of H.M. Dockyard, Devonport, who lived at the time of his death in Highbury. Young Sturdee early began to distinguish himself. He took the first prize at Mannamede School at Plymouth in 1880. In 1884 at the Tonbridge School he took the prize for French. He studied medicine, as we have indicated, at the London Hospital, where he made his mark in the prize lists for dressing, for dissections, &c. He was also, we believe, assistant demonstrator in the physiological laboratory. After taking the double qualification in London, he proceeded to examination for an appointment in the Royal Navy, in the direction of which all his aspirations went. He came out in the first place. In 1891 he went to Haslar, and in 1893 he was appointed to H.M.S. *Hood*, in which to the time of his premature death he was known as a most useful and agreeable officer. His French stood him in good stead, and in the Greek villages and places which his ship visited he showed an unusual facility of learning their language. His kindness to everybody was felt. He had passed the first part of the examination for the Fellowship of the Royal College of Surgeons, and everything promised a brilliant career in the service which he so much loved when news of his being drowned while bathing reached his family from the Admiralty. Since then news has been received of his funeral. We are permitted to make the following extract from a letter from the chaplain of his ship, and with this quotation we close our notice of a life all too short, but which has made a deep impression on all who came within its influence, and the loss of which to his mother and brothers and sisters is inexpressible:—

"At the funeral, which I conducted, there was a larger attendance of officers and men than I ever recollect seeing. Beautiful wreaths were sent by his own ship officers and men, each sending one, and by other friends, but there was one wreath that would interest you more than the rest. It was placed on the grave by a little boy of eight, and was composed of lovely flowers wrought into the shape of an anchor. I found that he was the little boy whose leg—very badly fractured just before Christmas—was perfectly restored by the skill and devotion of your son, so that the little fellow could walk without lameness or any sign of an accident. We were away from Malta since Dec. 27th, but on our return your son's first visit was to his little patient to see if his recovery was complete. The gratitude of the boy and his parents knew no bounds, and their sorrow found expression in the gift of this beautiful wreath."

JAMES STEDMAN CRAIGIE, M.D., C.M. EDIN.

DR. CRAIGIE died on the 16th inst. He was an M.D. of the University of Edinburgh (1884) and also B Sc. in Public Health (1888). He held the appointment of medical officer of health of Musselburgh and was one of the deputies of the county of Midlothian, the duties of which he fearlessly carried out under many difficulties on the adoption of the Public Health Act, clearing away many of the slums in the burgh. During his long illness he was the subject of much solicitude on the part of the community which he served so well. Apart from his high professional qualifications, he had great linguistic and literary faculties. He was the author of some of the principal medico-biographical articles in the last edition of "Chambers' Encyclopædia." He was also well known in musical circles in Edinburgh as an accomplished violinist. Those who knew him privately had learned to recognise in him, in addition to many other qualifications, a faculty for dealing with things generally in a broad and unconventional spirit.

HUGH FRANCIS CLARKE CLEGHORN, M.D., LL.D., F.R.S.E., J.P.

DR. CLEGHORN, who died at Stravithie, Fifeshire, on May 16th, had passed the most active years of his life in the Indian Medical Service, and was a distinguished authority on Indian botany and arboriculture. He was born in Madras in 1820, and received his education in Edinburgh and at St. Andrew's University. He was for some time a pupil of Professor Syme, and one of the house surgeons in the Edinburgh Royal Infirmary. He graduated in 1841, and thereupon returned, at the age of twenty-two, to Madras, where he was appointed Professor of Botany about twelve years later. In 1855 he was requested by the Governor of Madras to organise a Forest Department having for its object the preservation of tree life, and in course of time he was appointed one of the Commissioners for the Conservancy of Forests. In 1869 he retired from the Indian service, his labours on behalf of the improved system of forest management being officially acknowledged in complimentary terms. Returning to Scotland, Dr. Cleghorn temporarily filled the chair of Botany in Glasgow University during the indisposition of Professor Walker Arnott, and continued for many years to devote himself at Stravithie to his favourite botanical pursuits. He was a member of the Edinburgh Botanical Society, a Fellow of the Linnean Society and for several years President of the Royal Scottish Arboricultural Society.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the First Professional Examination for the Fellowship at a meeting of the Board of Examiners on Wednesday, the 15th inst.:—

Baldwin, Aslett, L.R.C.P. Lond., M.R.C.S. Eng., Middlesex Hospital.
Curtis, Henry Jones, L.R.C.P. Lond., M.R.C.S. Eng., University College, London.
Hall, Charles Beauchamp, L.R.C.P. Lond., M.R.C.S. Eng., St. Mary's Hospital.
Hulke, Sydney Backhouse, L.R.C.P. Lond., M.R.C.S. Eng., Middlesex Hospital.
Keyser, Charles Ralph, St. George's Hospital.
Scrase, Frank Edward, L.R.C.P. Lond., M.R.C.S. Eng., University College, Bristol, and St. Bartholomew's Hospital.
Smith, Thomas Rudolph Hampden, L.R.C.P. Lond., M.R.C.S. Eng., Cambridge University and St. Bartholomew's Hospital.
Worth, Francis James, L.R.C.P. Lond., M.R.C.S. Eng., St. Mary's Hospital.

Twelve gentlemen were referred back to their professional studies for six months.

Passed on Thursday, the 16th inst.:—

Collard, Frederick Stuartson, L.R.C.P. Lond., M.R.C.S. Eng., St. George's Hospital.
Dyson, Malcolm Goodworth, St. Bartholomew's Hospital.
Fox, George Raymond, L.R.C.P. Lond., M.R.C.S. Eng., St. Bartholomew's Hospital.
Going, Robert Marshal, Trinity College, Dublin, and London Hospital.
Jaffrey, Francis, L.R.C.P. Lond., M.R.C.S. Eng., St. George's Hospital.
Lynch, Stephen Frederick, King's College, London.
Mundy, Herbert, St. Bartholomew's Hospital.
Ridley, Nicholas Charles, L.R.C.P. Lond., M.R.C.S. Eng., St. Mary's Hospital.
Spicer, Arthur Herbert, Guy's Hospital.
Sutcliffe, William Greenwood, L.R.C.P. Lond., M.R.C.S. Eng., St. Thomas's Hospital.
Wallace, Lewis Alexander Richard, L.R.C.P. Lond., M.R.C.S. Eng., Oxford University and St. Thomas's Hospital.
Walsh, John Henry Tull, Surgeon-Captain I.M.S., L.R.C.P. Lond., M.R.C.S. Eng., Westminster Hospital.

Eight gentlemen were referred back to their professional studies for six months.

Passed on Friday, the 17th inst.:—

Brown, Ralph Charles, M.B. Melb., Melbourne University and Westminster Hospital.
Caveragh-Mainwaring, Wentworth Rowland, M.B. Adelaide, Adelaide University and London Hospital.
Churchill, Joseph Henry, St. Bartholomew's Hospital.
Crowley, John Henry, M.B. Melb., M.R.C.S. Eng., Melbourne University.
Fremantle, Francis Edward, Oxford University and Guy's Hospital.
Novis, Thomas Shepherd, London Hospital.
O'Meara, Eugene John, Guy's Hospital.
Randall, Martin, M.R.C.S. Eng., L.R.C.P. Lond., University College, London.

Eight gentlemen were referred back to their professional studies for six months.

Passed on Monday, the 20th inst.:—

Evans, Evan, Guy's Hospital.
Wood, John Forrester, L.R.C.P. Lond., M.R.C.S. Eng., St. Bartholomew's Hospital.

Ten gentlemen were referred back to their professional studies for six months.

The following gentlemen having passed the necessary examination, and having conformed to the by-laws and regulations, have been admitted Members of the College:—

Adams, Percy Edward, L.R.C.P. Lond., St. Bartholomew's Hospital.
Bacon, Robert Alfred Edward, L.R.C.P. Lond., St. George's Hospital.

Barritt, John Thomas, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
Basden, Harold Stevens, L.R.C.P. Lond., Cambridge University and London Hospital.
Baxter, Stephen Edward, L.R.C.P. Lond., St. Thomas's Hospital.
Bennett, Arthur George, L.R.C.P. Lond., St. Mary's Hospital.
Birley, Hugh Kennedy, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
Blackburn, Ernest Woodhead, L.R.C.P. Lond., Oxford University and St. Bartholomew's Hospital.
Blackett, Edward Joseph, L.R.C.P. Lond., St. George's Hospital.
Blount, George Bertie Clavell, L.R.C.P. Lond., St. Thomas's Hospital.
Burnett, Frank Marsden, L.R.C.P. Lond., St. Bartholomew's Hospital.
Burridge, Henry Alfred, L.R.C.P. Lond., King's College, London.
Burton, Leonard Lamming, L.R.C.P. Lond., London Hospital.
Butler, Thomas Harrison, L.R.C.P. Lond., Oxford University and St. Bartholomew's Hospital.
Caldicott, Charles Holt, L.R.C.P. Lond., Mason College, Birmingham.
Clark, William Gladstone, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital.
Clemesha, William Wesley, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
Conford, George James, L.R.C.P. Lond., Oxford University and St. Thomas's Hospital.
Cooper, Robert Montague le Hunte, L.R.C.P. Lond., St. Mary's Hospital.
Croneen, Sydney, L.R.C.P. Lond., Guy's Hospital.
Crouch, Herbert Challice, L.R.C.P. Lond., St. Thomas's Hospital.
Dalál, Ratanshá Dinshá, L.R.C.P. Lond., University of Bombay.
Devereux, Norman, L.R.C.P. Lond., Mason College, Queen's and General Hospitals, Birmingham, and Middlesex Hospital.
Dickin, Edward Percival, L.R.C.P. Lond., University of Edinburgh, Middlesex and St. Mary's Hospitals.
Dixon, Walter Ernest, L.R.C.P. Lond., St. Thomas's Hospital.
Dobbin, Edward John, L.R.C.P. Lond., Middlesex Hospital.
Dodd, Frederick Lawson, L.R.C.P. Lond., Middlesex Hospital.
Dodgson, Robert William, L.R.C.P. Lond., St. Mary's Hospital.
Down, Elgar, L.R.C.P. Lond., London Hospital.
Dunn, William Edward Nickolls, L.R.C.P. Lond., St. Bartholomew's Hospital.
Edge, Bruce Edgar, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
Fison, Edmund Towers, L.R.C.P. Lond., University of Cambridge and St. George's Hospital.
Fuller, Alfred Leonard, L.R.C.P. Lond., St. Thomas's Hospital.
Gardner, William, L.R.C.P. Lond., St. Mary's Hospital.
Gibbons, Arthur Philip, L.R.C.P. Lond., London Hospital.
Gillies, Sinclair, L.R.C.P. Lond., St. Bartholomew's Hospital.
Goddard, Gerald Hamilton, L.R.C.P. Lond., University College, London.
Griffiths, John Crisp, L.R.C.P. Lond., Mason College, Birmingham.
Groves, Ernest William Hey, L.R.C.P. Lond., St. Bartholomew's Hospital.
Hallwright, Matthew Leslie Guy, L.R.C.P. Lond., Mason College, Queen's and General Hospital, Birmingham, and University College, London.
Harrison, Herbert Meredith, L.R.C.P. Lond., St. Thomas's Hospital.
Head, Ernest Edward, L.R.C.P. Lond., King's College Hospital.
Heaton, Alan Baldwin, L.R.C.P. Lond., University of Cambridge, Yorkshire College, Leeds, and St. Thomas's Hospital.
Higginson, George, L.R.C.P. Lond., University of Cambridge and London Hospital.
Hopton, Ralph, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
Horton, Walter Hartland, L.R.C.P. Lond., St. Bartholomew's Hospital.
Isacke, Matthew William Stuart, L.R.C.P. Lond., St. Bartholomew's Hospital.
James, Charles Kemble, L.R.C.P. Lond., Middlesex Hospital.
James, Frederick Charles, L.R.C.P. Lond., St. Thomas's Hospital.
Jones, James Evan, L.R.C.P. Lond., St. Bartholomew's Hospital.
King, Thomas Percy, L.R.C.P. Lond., Cambridge University and Guy's Hospital.
Lane, John George Ogilby Hugh, L.R.C.P. Lond., Guy's and St. Thomas's Hospitals.
Laslett, Maurice Howard, L.R.C.P. Lond., St. Thomas's Hospital.
Lawson, Richard, L.R.C.P. Lond., St. Thomas's Hospital.
Legg, Thomas Percy, L.R.C.P. Lond., St. Bartholomew's Hospital.
Lister, William Tindall, L.R.C.P. Lond., Cambridge University and University College, London.
Lockett, George Vernon, L.R.C.P. Lond., University of Edinburgh.
McArthur, Arthur Norman, L.R.C.P. Lond., University of Melbourne, King's College and Charing-cross Hospitals.
Madge, Hubert Abraham, L.R.C.P. Lond., Charing-cross Hospital.
Marks, Herbert William James, L.R.C.P. Lond., Cambridge University and St. George's Hospital.
Marriott, Arthur, L.R.C.P. Lond., Firth College, Sheffield, and University College Hospital.
Meacher, John Howard, L.R.C.P. Lond., St. Bartholomew's Hospital.
Mills, Henry William, L.R.C.P. Lond., University of Edinburgh and St. Thomas's Hospital.
Moffat, Henry Alford, L.R.C.P. Lond., Guy's Hospital.
Montgomery-Smith, Edwin Charles, L.R.C.P. Lond., London Hospital.
Moore, Percy Lyndon, L.R.C.P. Lond., Cambridge University and St. Thomas's Hospital.
Mott, Clarence Harry, L.R.C.P. Lond., London Hospital.
Mumford, Wilfred George, L.R.C.P. Lond., Guy's Hospital.
Norbury, William, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital.
Ogden, Ogden Watson, L.R.C.P. Lond., Durham University.
Owen, Arthur Dudley, L.R.C.P. Lond., Royal Infirmary, Bristol.
Owles, Oscar William, L.R.C.P. Lond., St. Bartholomew's Hospital.
Pakes, Walter Charles, L.R.C.P. Lond., Guy's Hospital.
Palin, Edward Watson, L.R.C.P. Lond., Oxford University and St. Thomas's Hospital.
Pardoe, John George, L.R.C.P. Lond., Aberdeen University and Charing-cross Hospital.
Peake, William Harland, L.R.C.P. Lond., Royal Infirmary, Newcastle, and Guy's Hospital.
Pearson, Maurice Grey, L.R.C.P. Lond., St. Bartholomew's Hospital.
Pera, Edgar Courtney, L.R.C.P. Lond., St. Thomas's Hospital.
Perry, Edmund Ludlow, L.R.C.P. Lond., St. Thomas's Hospital.
Phillips, David, L.R.C.P. Lond., Middlesex Hospital.
Pinchard, Michael Biddulph, L.R.C.P. Lond., Middlesex Hospital.
Pitt, William Carey, L.R.C.P. Lond., Guy's Hospital.
Playfair, Ernest, L.R.C.P. Lond., King's College Hospital.
Price, George Basil, L.R.C.P. Lond., University College Hospital.
Reynolds, Frank Ernest, L.R.C.P. Lond., London Hospital.
Richards, John, L.R.C.P. Lond., University College Hospital.
Rigg, Samuel Edward, L.R.C.P. Lond., St. Bartholomew's Hospital.
Sedgwick, Hubert Redmayne, L.R.C.P. Lond., Cambridge University, London, and St. Thomas's Hospital.
Smith, Frank Laughton, L.R.C.P. Lond., Mason College, Queen's, and General Hospital, Birmingham.
Smith, Lewis Albert, L.R.C.P. Lond., London Hospital.
Smith, Percy Montague, L.R.C.P. Lond., St. Mary's Hospital.
Sowry, George Herbert, L.R.C.P. Lond., St. Bartholomew's Hospital.
Stanley, Hubert, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital.
Statham, Charles John Baron, L.R.C.P. Lond., Bombay University and Guy's Hospital.
Stephenson, John Stuart, L.R.C.P. Lond., St. Bartholomew's Hospital.
Stewart, Charles Balfour, L.R.C.P. Lond., Cambridge University and Royal Infirmary, Liverpool.
Stokes, John Wilfred, L.R.C.P. Lond., University College Hospital.
Swainson, Edwin Arthur Cleveland, L.R.C.P. Lond., Cambridge University and Middlesex Hospital.
Thomas, William Protheroe, L.R.C.P. Lond., London Hospital.
Thompson, Henry Evans, L.R.C.P. Lond., St. Bartholomew's Hospital.
Townend, Richard Hamilton, L.R.C.P. Lond., London Hospital.
Toye, Edwin Josiah, L.R.C.P. Lond., St. Bartholomew's Hospital.
Tresidder, Percy Edgar, L.R.C.P. Lond., Guy's Hospital.
Tribe, Paul Cuningham Edward, L.R.C.P. Lond., King's College Hospital.
Tucker, Ernest Frederick Gordon, L.R.C.P. Lond., London Hospital.
Van Someren, Ernest Herbert, L.R.C.P. Lond., Guy's Hospital.
Vivian, John Henry Percival, L.R.C.P. Lond., St. Thomas's Hospital.
Walker, Henry Ros, L.R.C.P. Lond., King's College Hospital.
Walls, Edward Geoffry, L.R.C.P. Lond., Mason College, Queen's, and General Hospital, Birmingham.
Wanhill, Charles Frederick, L.R.C.P. Lond., University College Hospital.
Waring, Anthony Henry, L.R.C.P. Lond., University College Hospital.
Warrington, Richard James, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
Waters, Fred William, L.R.C.P. Lond., St. Thomas's Hospital.
Webster, Thomas Leeming, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester, and St. Bartholomew's Hospital.
Whitley, Henry Walter, L.R.C.P. Lond., Charing-cross Hospital.
Wilkins, John Claude Verity, L.R.C.P. Lond., Guy's Hospital.
Wilks, Morris, L.R.C.P. Lond., University College Hospital.
Williams, David Franklin, L.R.C.P. Lond., University College and Royal Infirmary, Liverpool.
Williams, Kenway Thomas, L.R.C.P. Lond., Mason College, Queen's and General Hospital, Birmingham.
Williams, Leonard Addams, L.R.C.P. Lond., Middlesex Hospital.
Willis, William Morley, L.R.C.P. Lond., University College and Royal Infirmary, Bristol.
Winter, John Bradbury, L.R.C.P. Lond., Guy's Hospital.
Wiseman, David William, L.R.C.P. Lond., Charing-cross Hospital.
Woodward, Arthur, L.R.C.P. Lond., St. Bartholomew's Hospital.
Worthington, George Vigers, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital.
Wyborn, Walter Edward, L.R.C.P. Lond., Charing-cross Hospital.
Young, Archibald, L.R.C.P. Lond., Firth College, Sheffield, and University College Hospital.
Young, Charles Whitwick, L.R.C.P. Lond., Charing-cross Hospital.

SOCIETY OF APOTHECARIES OF LONDON.—**The following candidates have passed in the under-mentioned subjects:**

Surgery.—J. Ash, St. Thomas's Hospital; E. R. Bowen, Brooklyn and Bristol; E. E. Cornaby, Cambridge and London Hospital; A. H. P. Dawnay, University College and St. Thomas's Hospital; R. A. Fegan, St. Bartholomew's Hospital; C. F. Le Sage, London Hospital; E. D. Macnamara, Westminster Hospital; A. P. Mürtz, King's College; G. H. Smith, St. Bartholomew's Hospital; H. Williams, Middlesex Hospital.

Medicine, Forensic Medicine, and Midwifery.—S. B. Blomfield, Westminster Hospital; W. E. Kirby, University College; W. G. Noble, London Hospital.

Medicine and Midwifery.—A. J. Petyt, Cambridge and Leeds; M. White, St. Thomas's Hospital.

Medicine.—A. C. Fenn, St. Bartholomew's Hospital; W. A. Higgins, Cambridge and Birmingham; M. Umanski, Kharcoff.

Forensic Medicine and Midwifery.—A. H. P. Dawnay, University College and St. Thomas's Hospital; B. L. Dhingra, Lahore; P. G. Lodge, Leeds and St. Thomas's Hospital.

Forensic Medicine.—E. D. Macnamara, Westminster Hospital; G. H. Smith, St. Bartholomew's Hospital.

Midwifery.—W. B. Bremner, King's College; H. Clapham, Sheffield; J. H. R. Pigeon, Bristol; W. H. Reed, Bombay and King's College; A. Robinson, Leeds; E. H. Tipper, Guy's Hospital; L. G. W. Tyndall, St. Mary's Hospital.

To Messrs. Bremner, Fenn, Higgins, Kirby, Le Sage, Macnamara, Noble, Petyt, and Umanski was granted the diploma of the society.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Kayserling has been appointed Assistant in the Pathological Institute and Dr. René du Bois-Reymond, a son of the eminent physiologist, Assistant in the Experimental Department of the Physiological Institute. Dr. Günther has been appointed to succeed Dr. Thierfelder as Custos of the Museum of Hygiene. *Bordeaux:* Dr. Boursier has been appointed to the Professorship of Clinical Gynæcology.—*Chicago (Medical College):* Dr. W. S. Hall has been appointed Professor of Physiology.—*Cracow:* Dr. Alexander Rosner has been recognised as *privat docent* in Midwifery and Gynæcology.—*Prague (German University):* Dr. Wunschheim has been recognised as *privat-docent* in Pathological Anatomy.—*(Bohemian University):* Dr. Karl Chodonusky has been promoted to the Extraordinary Professorship of Pharmacology.—*Vienna:* The Minister of Education has appointed Dr. Norbert Ortner *privat docent* in Internal Medicine and Dr. Leopold Réthi as *privat-docent* in Laryngology and Rhinology.

PRESENTATIONS.—Dr. Herbert Bramwell of Cullercoats, Northumberland, on the occasion of his leaving the district, has been presented with a handsome silver tea service and an album containing local views, with an address bearing the names of the subscribers, as a token of esteem and regard from friends in North Shields, Tynemouth, Cullercoats, Whitley, and Monkseaton.—Dr. Edmund Downes of Eastbourne has been the recipient of a testimonial, consisting of a handsome electro-plated tea kettle and stand and a hot-water jug, from the members of the Eastbourne Ambulance Class, in recognition of his generous services as honorary instructor of the class for some years.—On the 18th inst. Mr. W. Davies, M.R.C.S. Eng., of Peckham, was presented with a handsome timepiece, aneroid barometer, thermometer, and perpetual calendar, all combined in one piece. The presentation was made on behalf of the Ambulance Class for Women lately conducted by him at Messrs. Braby's Works, Deptford.

EDINBURGH ROYAL INFIRMARY RESIDENTS CLUB.—The inaugural dinner of this club was held in the Royal Hotel, Edinburgh, on May 3rd. No less than seventy-six members were present, many of them having travelled long distances. Dr. Alexander James occupied the chair, and proposed the toast of the evening, "The Residency," in a speech containing many interesting reminiscences of the old infirmary. Sir Thomas Grainger Stewart gave "The Chairman," and afterwards replied to the toast of the "Senior Old Resident Present," which was proposed by Dr. C. E. Douglas. The proceedings terminated with a symposium, which was no less successful than the dinner. At a business meeting of the club held before the dinner the following were elected office-bearers for the year:—President, Dr. Alexander James. Secretary: Dr. Claude B. Ker Treasurer: Dr. R. J. A. Berry. Committee: Drs. F M. Caird, G. A. Gibson, C. C. Easterbrook, Cattanach, Dowden, and Musgrove. The club now numbers more than 170 members and seems certain of a prosperous future.

LITERARY INTELLIGENCE.—We have received the first volume of "Dennis's System of Surgery," which promises to be a very full and authoritative representation of the state of surgery in the United States. It is edited by Frederick S. Dennis, M.D., Professor of Surgery in Bellevue Hospital Medical College, who is also a Member of the Royal College of Surgeons of England. He is assisted in the editorship by John S. Billings, M.D., LL D. Edin., D.C.L. Oxon., and Deputy-Surgeon-General of the United States. The articles in this volume alone include one by Dr. Billings on the History and Literature of Surgery; one on General Bacteriology of Surgical Infections by Wm. H. Welch, M.D., Professor of Pathology of the Johns Hopkins University; one on Surgical Pathology, including Inflammation and the Repair of Wounds, by William T. Councilman, Professor of Pathology, Harvard Medical School, Boston; one on Fractures and Dislocations, by Professor Dennis; one on Anæsthesia by Horatio Wood, M.D., Professor of Materia Medica and Therapeutics, University of Pennsylvania; and several other articles of first-rate importance as expositions of the present state of American knowledge and doctrine. We must defer any detailed criticisms of this work, but we hasten to announce its appearance as a fact of credit to American medical literature and to congratulate Professor Dennis on such a body of colleagues.

THE Glasgow University Club, London, will dine in the Holborn Restaurant on Monday next, May 27th, at 7.30 P.M. The Right Hon. Henry Campbell-Bannerman, M.P., Secretary of State for War, will preside, and the guests of the club will be General Sir Evelyn Wood, V.C., G.C.B., and Mr. J. Fletcher Moulton, Q.C., M.P. Graduates or former students of Glasgow University who have not yet joined the club and who may be desirous of doing so are requested to communicate with either of the hon. secretaries, Mr. Norman M. MacLehose, 13, Queen Anne-street, Cavendish-square, W., or Mr. James M. Dodds, Dover House, Whitehall, S.W.

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL.—"The Experience of the Hospital in Abdominal Surgery (gynæcological operations apart) during the years 1888–1894 inclusive" will form the subject of three lectures which will be delivered by Mr. T. Holmes, F.R.C.S. (the Hunterian Lecturer in Surgery) on June 5th, 6th, and 12th, at 5 P.M. Dr. W. Howship Dickinson (the Baillie Lecturer in Physic), will also deliver the following lectures:—June 19th, at 5 P.M., on Some recent observations relating to the Cardio-vascular Change of Renal Disease; June 26th, at 5 P.M., on Some points touching Disease of the Heart; and July 3rd, at 5 P.M., on Dropsy. All the lectures will be delivered in the school. Members of the profession will be admitted on presenting their visiting cards.

DERMATOLOGICAL SOCIETY OF LONDON.—The annual meeting of this society, founded in 1882, was held on May 8th, and important changes in the constitution of the society were unanimously adopted. Previously the number of members was limited to thirty for the more convenient examination of patients, but it was resolved that henceforth there should not be any limit to the number. The following gentlemen were elected to form an Executive Council for the session 1895–96:—Mr. William Anderson, Dr. Cavafy, Dr. Radcliffe Crocker, Dr. James Galloway, Dr. Robert Liveing, Mr. Malcolm Morris, Dr. J. F. Payne, Dr. E. C. Perry, Mr. Marmaduke Sheild, Dr. Frederick Taylor; Dr. Stephen Mackenzie (Treasurer); Dr. T. Colcott Fox and Dr. J. J. Pringle (Hon. Secs.).

BEQUESTS AND DONATIONS.—The late Deputy Inspector of Hospitals, Dr. G. Willes, R.N., has bequeathed £500 each to the Royal Portsmouth Hospital and the Portsmouth Eye and Ear Infirmary.—Mrs. Anne Groom, widow of the late Mr. William Groom, of West Derby, has bequeathed £100 each to the Liverpool Hospital for Cancer and Skin Diseases, the Liverpool Infirmary for Children, and the Home for Female Incurables at Liverpool, and £400 to the Liverpool Medical Missionary Society.—Sir James Reckitts has given £1000 towards forming an endowment fund for the Withernsea Convalescent Home.—The London Clothworkers' Company has granted donations of £70 to the North-Eastern Hospital for Children, Hackney-road, Shoreditch, and of 80 guineas to Queen Charlotte's Lying-in Hospital, Marylebone-road.—Mr. Frederick Wilder of Hurley Hall, Berkshire, has contributed £100 towards the cost of the proposed new operating theatre at the Royal Berkshire Hospital, Reading.—The Treasurer of the Metropolitan Hospital, Kingsland-road, has received from the Shoreditch Concert Committee £104 3*s.* 1*d.*, the proceeds of a concert held in the town-hall, Shoreditch.—Mrs. Emma Mackenzie, late of Kensington Park-gardens, has bequeathed £1000 to the Hospital for Incurables, West Hill, Putney.—The late Mr. Thomas W. Thompson of Ampthill-square, Hampstead-road, has bequeathed £100 each to the University College Hospital, Gower-street, London, and the Hospital for Incurables, Putney.—Mrs. Sarah R. Smyth, late of Stevenage, Herts, has bequeathed £300 to the Herts Convalescent Home, St. Leonards.—The following contributions have been made by the London City Companies to the special fund now being raised for St. Thomas's Hospital: the Merchant Taylors' Company, 500 guineas; the Armourers' and Braziers' Company, 100 guineas; the Goldsmiths' Company, £500; the Vintners' Company, £52 10*s.*; the Dyers' Company, £25; the Ironmongers' Company, 100 guineas; and the Waxchandlers' Company, 25 guineas. To the same fund the London and South-Western Railway Company has contributed £105 and Lord Iveagh £1000.—The late Earl of Moray has bequeathed £50,000 to the Edinburgh Royal Infirmary.—Alderman Bindloss, late Mayor of Kendal, has bequeathed £1000 each to the Middlesex Hospital, the St. George's Hospital, and King's College Hospital, London.

AT the opening of the St. Mary's Hospital bazaar at Portman Rooms on June 27th by the Princess of Wales she will be conducted through the bazaar by the Duke of York as President of the Hospital.

ROYAL MICROSCOPICAL SOCIETY.—May 15th, the President, Mr. A. D. Michael, in the chair. Mr. J. Swift exhibited an improved form of the Nelson Microscope Lamp fitted with mechanical movements, and also a "Wales" microscope which had been fitted with the new mechanical stage.—Mr. T. Comber read a paper on the "Development of the young valve of Trachyneis Aspera." The subject was illustrated with lantern photographs exhibited upon the screen.—Miss Ethel Sargant's paper on the "First Nuclear Division in the pollen mother cells of Lilium Martagon &c.," was communicated by Dr. D. H. Scott. A discussion ensued in which Professor J. B. Farmer, Mr. Spencer Moore, and Dr. Scott took part.

MEDICAL SOCIETY OF LONDON.—The following officers were elected to serve during the coming sessional year:—President: Sir James Crichton Browne, M.D., F.R.S. Vice-presidents: Sidney Coupland, M.D., Henry H. Clutton, John C. Thorowgood, M.D., and Charles B. Lockwood. Librarian: William Henry Allchin, M.D. Honorary Secretaries: Amand Routh, M.D., and George R. Turner. Honorary Secretary for Foreign Correspondence: Heinrich Port, M.D. Council: Howard Barrett, J. Mitchell Bruce, M.D., John Cahill, Andrew Clark, Sir William B. Dalby, F. Swinford Edwards, David Ferrier, M.D., F.R.S., Archibald E. Garrod, M.D., F. de Havilland Hall, M.D., Norman Kerr, M.D., Edward D. Mapother, M.D., H. Montague Murray, M.D., Edward J. Nix, M.D., James W. J. Oswald, M.D., William Pasteur, M.D., Charles H. Ralfe, M.D., Frederick T. Roberts, M.D., Frederick Treves, John Tweedy, and Joseph White.

THE FIFTH INTERNATIONAL CONGRESS OF OTOLOGY.—The above meeting will be held in Florence, under the presidency of Professor Grazzi, from Sept. 23rd to 26th next. The following are the subjects selected for discussion:—1. The Treatment of Intracranial Abscesses consequent on Purulent Diseases of the Ear, introduced by Dr. Thomas Barr of Glasgow. 2. General Treatment in Diseases of the Ear, introduced by Dr. Gellé of Paris. 3. General Treatment in Diseases of the Internal Ear, introduced by Professor Gradluigo of Turin. 4. The Present State of our Knowledge of the Pathology of the Labyrinth, introduced by Professor Politzer of Vienna. 5. On the Physiology of the Middle Ear, introduced by Dr. Charles Secchi of Bologna. All members of the profession who intend to contribute papers or to be present at the congress are requested to communicate with the secretary not later than June 15th. Early in July each intending *congressista* will receive a detailed programme of the meeting. The official languages are Italian, French, German, and English. The subscription, which includes a copy of the printed transactions of the congress, is twenty francs. The secretary-treasurer is Dr. T. Bobone, San Remo.

THE annual general meeting of the Society for the Relief of Widows and Orphans of Medical Men was held on Thursday, May 16th, at 5.30 P.M. The president (Sir James Paget) presided. From the report read by the secretary it appeared that 13 new members had been elected during the year, 11 had died, and 4 resigned, leaving 306 on the books. Two widows had been admitted, 3 had died, the number on the books at the end of the year being 53. The number of orphans remained the same as in 1893—viz., 9. The grants during the year amounted to £2805, including a Christmas present of £303. The expenses were £241. The receipts available for the payment of grants and expenses had been £3262 and the expenditure £3046. A sum of £785 had been invested. Sir J. Russell Reynolds and Mr. Willett were elected vice-presidents, and Dr. Bazzard, Dr. Pollock, Mr. Manley Sims, Dr. Kempe, Mr. Underwood, Mr. Pearce Gould, and Dr. Lewers were elected directors to fill the vacancies caused by death and retirement. A grant of £26 was made under by-law 78. A vote of thanks, proposed by Mr. Christopher Heath, to the editors of the medical journals for their assistance in making known the work of the society, was passed unanimously. The proceedings terminated with a vote of thanks, proposed by Dr. Glover, to Sir James Paget, the president, for his kindness in taking the chair at the meeting.

NORTH-WEST LONDON CLINICAL SOCIETY.—A clinical meeting of this society was held on May 8th, Dr. R. H. Milson in the chair.—Dr. Harry Campbell showed a case of Post-hemiplegic Hemichorea in a woman. The condition dated from infancy, and Dr. Campbell thought in all such cases the cause was softening rather than hæmorrhage. He had given bromides and opium with benefit.—Dr. Guthrie showed a case of Violent Post-hemiplegic Spasms in a man aged twenty-five. The symptoms pointed to implication of the cortical motor area, and Dr. Guthrie raised the question of operation by trephining.—Mr. Jackson Clarke showed a child with a Syphilitic Skin Lesion of the Buttock, and exhibited specimens of Gummata removed from the Viscera of other patients. He advocated treatment by mercurial inunction in infantile syphilis. Dr. Coode Adams regarded the lesion as tuberculous, and based this view on the family history.—Mr. Gordon Brodie showed a large Angioma of the Buttock. He proposed to remove it after preliminary electrolysis.—Mr. Brodie also showed a case of Dermatitis attributed to contact with bichromate of potash.—Dr. Herschell, Dr. Coode Adams, and Dr. Gill spoke.—Dr. Harry Campbell showed the heart and spleen from a case of Ulcerative Endocarditis.—Dr. Cameron, Mr. Clayton, and Dr. Guthrie joined in the discussion.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Inebriates.

THE Lord Chancellor has introduced into the House of Lords a Bill to amend the Inebriates Acts of 1879 and 1885 and the law respecting drunkenness.

Opium Commission.

There has been published, by way of supplement to the report of the Royal Commission on Opium, a note by the Maharaja Bahadur of Durbhanga. The Maharaja in this note states that the report of the Commission is, on the whole, drawn up in accordance with the spirit of the resolutions that were passed at the last sitting in Bombay, and as such he is prepared to accord a general support to it. He wishes, however, to lay before the British public the views entertained on the opium question by the majority of the Indian thinking public. This he does in the note.

Cock-fighting in Scotland.

There has been passed through the two Houses of Parliament to put county authorities in Scotland in a position to deal with cock-fighting, an ancient and brutal form of sport, which appears to have had a somewhat extensive revival in certain parts of Scotland.

Factories and Workshops Bill.

The Grand Committee continues to make substantial progress with the Factories and Workshops Bill. At its recent meetings it has been mainly engaged with the provisions as to the cleaning and protection of machinery and the precautions against fire. On Tuesday, May 21st, some time was spent with Clause 11, which provides for the representation of workmen on arbitrations as to special rules applicable to certain dangerous trades. These rules at present are drawn up by the Home Office, and the employer can demand an arbitration but not the workman, and the object of the clause is to bring in the latter. Mr. John Burns took up the position that there should be no arbitration at all and that the matter should be left in the hands of the Home Office. His idea was that the clause gives employers and workmen the power to contract out of healthy and sanitary conditions of work. Mr. Asquith thought that both employers and workmen would hesitate before handing over this great power to a Government department. The result of the debate was to leave the clause untouched in this respect.

HOUSE OF LORDS.

THURSDAY, MAY 16TH.

Richmond Lunatic Asylum, Dublin.

Lord Ribblesdale said, in reply to a question put by the Earl of Belmore, that the estimated cost of remodelling this asylum was £60,000. For that sum suitable buildings and accommodation would be provided for the residue of the lunatics of the district (about 300 in number) who could not be accommodated in the new buildings at Portrane. The new buildings were estimated to cost £240,000 and to accommodate 1200 lunatics. The Irish Government at first held the opinion that it would be better to abandon the existing asylum and erect new buildings on a better site, and they made representations to that effect to the Board of Control; but the answer was that whereas the old buildings were worth £100,000 while used for the accommodation of lunatics, they would not be worth more than £20,000 if sold in the open market. After that answer the Irish Government did not feel justified in further interference with the discretion of the Board of Control.

Lord Ashbourne, in the course of a short speech, expressed strong objection to this large sum of money being spent on a bad and condemned site, and said that the better plan would be to seek a new site with healthy surroundings, and there erect an asylum in accordance with the requirements and suggestions of modern science for the treatment of the insane.

HOUSE OF COMMONS.

THURSDAY, MAY 16TH.

The Tuberculosis Commission.

Mr. Shaw-Lefevre said, with regard to this subject, that the Commission made no recommendations. It had arrived at various conclusions of fact as to the existence of tuberculosis in animals and as to the possibility of its being communicated to consumers of meat and milk. These conclusions appeared to point to the expediency of an extension of the system of inspection of dairies, slaughter-houses, and butchers' shops, and possibly to the general establishment of public slaughter-houses. Until the evidence taken by the Commission was published and time had been given for the consideration of the very large and difficult questions involved he should be quite unable to state what the intentions of the Government were upon these matters, or whether it was desirable to have a further inquiry as had been suggested.

FRIDAY, MAY 17TH.

Insanitary Workshops in Glasgow.

Mr. Schwann asked the Home Secretary how many complaints had been made by the factory inspectors in Glasgow to the local sanitary authorities in that city with reference to defects and insanitary conditions in workshops during the month of April last, and how many of them could have been rectified immediately by the factory inspectors had they possessed the same power to deal with defective sanitation in workshops that they possess in factories.

Mr. Asquith replied that thirty-eight complaints were made to the sanitary authorities in Glasgow in April, including twenty-two workshops in an uncleanly state, five workshops overcrowded, six workshops requiring additional waterclosets or waterclosets requiring structural alteration. Of these, twenty-six could have received attention by Her Majesty's inspectors of factories had they the same power in workshops as they have in factories.

MONDAY, MAY 20TH.

Sanitary Inspectors in Scotland and Private Practice.

Sir George Trevelyan informed the House that sanitary inspectors are engaged in private business or hold other public appointments in the following Scottish counties—viz., Aberdeenshire, Fife, Nairn, Peebles, Selkirk, and Orkney and Zetland.

The Veterinary Department.

Mr. Herbert Gardner, President of the Board of Agriculture, replying to a question, said that on the rearrangement of business which took place on the retirement of Professor Brown in 1893, the term "Animals Department" was applied to the officers engaged on duties which were connected with the animal industry, and which did not require the possession of veterinary knowledge for their proper performance. The term "veterinary" would have been inappropriate to the division thus constituted, and a separate status was, moreover, assigned to the veterinary staff. The principal of the division was Major John Trenchant Tennant, who was not a veterinary surgeon, but who had had nearly twenty years' experience of the business upon which he was engaged, and to whose ability and work in the past agriculturists were very greatly indebted. He was aware that many members of the veterinary profession would have preferred that no changes in their organisation should have been made; but he was satisfied that those changes were necessary in the interest of the public service, and he did not propose—nor, indeed, was it in his power—to make any other arrangements.

TUESDAY, MAY 21ST.

Influenza.

Mr. Percy Thornton asked whether the promised inquiry into the different nature of ordinary cold and the malarial epidemic termed influenza, which had visited England each winter since 1889 and occasionally appeared in the summer also, would include all available data concerning the sequelæ or after-effects of the complaint in its later phases.—Sir Walter Foster replied that the object of the inquiry was to ascertain whether any relations existed between the ordinary influenza cold and the malarial epidemic influenza, and it had been found that the acute stages of the two diseases alone afforded an opportunity for the necessary bacteriological investigation. It was not considered that any further study of the sequelæ of the two diseases was necessary.—Mr. Thornton asked whether medical men would be encouraged to give their experience to the Medical Department of the Local Government Board.—Sir Walter Foster said he felt sure that medical men required no encouragement to submit anything for the benefit of the public in stamping out this serious disease.

The Dangers of Electric Lighting.

Mr. Bryce, President of the Board of Trade, replying to Mr. Weir, said that private electric lighting companies having statutory powers were under obligations similar to those imposed on local authorities, and were also prohibited from using overhead wires without the consent of the Board of Trade and the local authority. Private electric lighting companies not having statutory powers were subject to the regulations for the protection of the public safety prescribed under the provisions of the Electric Lighting Acts, 1882 and 1888, although the use of overhead conductors was not prohibited by those Acts. Moreover, urban authorities under the Public Health Act of 1890 were empowered to make regulations for the prevention of danger or obstruction to the public from wires stretched over, along, or across any street.

WEDNESDAY, MAY 22ND.

Insurance of Children.

On the motion of Sir Richard Webster, the Funeral Expenses of Children Insurance Bill was read a second time.

IN COMMITTEE.

Food Products Adulteration.

The Select Committee of the House of Commons on Food Products Adulteration resumed the examination of witnesses on Tuesday, May 21st, Sir Walter Foster occupying the chair.

Mr. F. G. Ivey, of Messrs. Hansen, Son, and Barter, London, who attended the Committee on the suggestion of the London Chamber of Commerce, said in reply to the Chairman, that he was not in favour of any great alteration in the law with regard to coffee and chicory mixtures. He thought that where the proportion of coffee was in excess of that of chicory, the article should be called coffee and chicory, and where the proportion of chicory was in excess of coffee it should be called chicory and coffee. He would not put the proportions on the labels. So for analysts had not been able to arrive at the proportions of the two articles found in the mixtures, and while that was so he did not think it right to state proportions on the labels. In his view the public did not require to know the proportions, because they bought according to the price and were well aware when they offered a low figure that they were getting a large proportion of chicory.—If the only security the public has is the price then a great deal of what has been done under the Adulteration Acts is useless because the public can protect themselves?—Yes, but the public are alive to their own interests.—The argument against all this legislation was that the purchaser might take care of himself, but the State determined otherwise, and said we will try to take care of the purchaser. Do you wish to go back to the old platform?—I would stand upon the present platform and not depart from it. In 1882 it was proposed in Parliament that the proportions should be stated on the label, but the proposal was rejected. The view he took was that the difficulties of analysts were so great that any attempt to specify on the label the exact proportions of chicory and coffee would lead to unjust prosecutions. He would certainly modify this view if he found the difficulties of analysts were not so great as he believed them to be. The sale of coffee had not increased in recent years, and this he attributed to the very low price of tea and the fact that the English people were not a coffee-drinking people. He had not the slightest doubt that if Parliament interfered with the sale of mixtures the consumption of coffee would still further fall. In very many districts the sale of mixtures was far in excess of pure coffee; in the case of some districts it represented as much as 90 per cent. of the trade. Best coffee cost the grocer about 1*s.* 4*d.* per lb., and the chicory he would mix with it about 3½*d.* per lb.

By Mr. Jeffreys: He would have no further restriction put upon the trade in mixtures, because the trade was honestly conducted and the public were satisfied. He could not admit for a moment that the public were deceived. If a customer asked for pure coffee and was supplied with a mixture then the vendor would be liable to prosecution under the present law.

By Mr. Kilbride: He did not think that grocers made undue profit by the sale of mixtures, because if the customer found he was supplied with an inferior article he would transfer his custom elsewhere.

Mr. J. C. Sanderson, honorary secretary of the Coffee Association of London, stated that in 1886 he had forty-three samples of mixtures taken in different parts of London analysed, with the result that they were found to contain on an average 50 per cent. of chicory, burnt sugar and other vegetable substances. Twenty-two of the samples were labeled French coffee, and contained from 62 to 93 per cent. of chicory, the average being 70 per cent. These mixtures were sold at prices which represented something like 100 per cent. profit to the vendors. He had no reason to believe that the state of things had improved since 1886. He thought that the proportions of chicory and coffee should in the interests of the public be stated on the label, and he felt confident that if makers were compelled to do this they would adopt better methods of manufacture to enable them to state the proportions. As things were at present, he had not heard analysts say much about difficulty experienced by them in determining the proportions. He considered the law insufficient. He considered that at the present moment makers had a licence to mix as much chicory as they liked with coffee, so long as they put on a notice saying that the article was sold as a mixture of chicory and coffee. This trading with the name of coffee should not be allowed. When there was a greater proportion of chicory than coffee present they should call the article "chicorino" or something of that sort, or they should make people sell coffee and chicory separately, and allow the purchaser to mix them.

Mr. Innes Rogers, of Messrs. Joseph Travers and Son, Limited, London, said he had been requested to give evidence as to the general grocery trade by the London Chamber of Commerce. He was strongly opposed to the unlimited use of chicory in the making of coffee mixtures. In his opinion, coffee was taken because of the vegetable alkaloids, which afforded a stimulus to the nerves, and if they substituted a roasted vegetable root like chicory, which had none of these alkaloids, they interfered with what the public desired. He considered that the present use of chicory was an abuse of the privilege given by Parliament, and therefore he thought the privilege should be modified or limited in some way. If people did not get the stimulus they expected from the coffee or coffee mixture they resorted to something else, probably tea, and in this way the consumption of coffee suffered. As a matter of fact, the present coffee trade was not a trade in coffee but a trade in chicory. He would have the proportions stated in the same way as the strength of spirits was stated, and if this were done the public would be protected and the trade would not suffer. He would enforce a limit beyond which chicory might not be used. Discussing the Act of 1875 generally, witness said it was well meant, but it was no deterrent to crime, not being sufficiently stringent and far-reaching. So far as the spice trade was concerned, there had been more adulteration since than before the Act. A good many years ago THE LANCET made an inquiry as to the state of the food-supply throughout London, and their commissioners found an extraordinary amount of adulteration. But in the old days, before THE LANCET inquiry, the people who did the adulteration worked upon a small scale and with little scientific knowledge; nowadays they worked on a great scale and called in the aid of science. It had become a case of setting science to catch science. Witness then explained to the Committee different methods by which pepper and ginger were adulterated. In this connexion he advocated that prosecutions should be directed against the manufacturer, the wholesale dealer, and the importer, as

well as against the retailer, who very often was in no way to blame for the nature of the article he sold.

The examination of Mr. Rogers was not concluded when the Committee adjourned.

The Committee met again on the following day, with Sir Walter Foster in the chair.

Mr. Innes Rogers was further examined by members of the Committee. He expressed the opinion that there was a considerable amount of direct adulteration in the grocery trade, affecting such articles as spices, arrowroot, seeds, and liquorice. The London Chamber of Commerce had passed a number of resolutions on the subject. They had declared, among other things, that the operation of the Adulteration Acts should be extended to wholesale dealers, that food should be held to include all articles used in the preparation of foods and drinks, that the Government should be called upon to establish a central and fully equipped analytical department, that the Government should have power to determine, fix, and vary, with reasonable notice, standards of purity, and that travelling inspectors should be appointed to see to the enforcement of the law. His opinion was that direct adulteration was not properly dealt with under the existing law. Very often there was no prosecution until a great deal of mischief had been done, and then the small retailer would be dealt with, although he had not committed the adulteration and probably knew nothing of it; while the wholesale manufacturer, who really committed the fraud and profited by it, was left unpunished. Even in cases where the wholesale manufacturer was reached the penalties were insufficient as deterrents. He would have the whole stock seized and imprisonment or heavy fines imposed. He did not wish to cast any reflection on the inspectors, but they went where they could most easily obtain a conviction, and he had no doubt that they purposely selected the green assistant. He was aware that in many places the inspectors did not make the purchases themselves, but employed other persons for the purpose. In the case of mixtures of coffee and chicory, the makers as a rule gave the retailers full warning that the article they supplied was not pure coffee. In his opinion the administration of the present adulteration laws was in the last degree capricious and unsatisfactory. In some districts there were no prosecutions at all, and in some he had reason to believe there was actual connivance between the petty officers of the law and the offenders. In some districts the local authorities found the expense of exposing adulteration too great for them to undertake it. The analysts as a body were entitled to the greatest respect. With the imperfect means at their disposal they had done wonders. But at the same time appointments had been made of totally unfit men. Medical men and pharmaceutical chemists had been appointed who had no knowledge of the subject, and, moreover, the salaries paid were quite insufficient. There was no general supervision of analysts, and analysts received no aid from the Government in pursuing their work. Although he himself had nothing to complain of in connexion with the Somerset House laboratory, it was frequently said that it was behind the times. He would bring all the Acts dealing with adulteration into one Act, which might be called the Adulteration Act, and he would have all places where food, drugs, or drink were sold open to inspection at all reasonable hours.

Mr. J. C. Foster, member of a firm of spice merchants in Great Tower-street, London, gave evidence as to adulteration carried on in liquorice, arrowroot, carroway, pepper, and ginger. Liquorice, he said, was adulterated to the extent of 50 per cent. of foreign substances. Flour and miller's sweepings were used, with the result that after a time the liquorice root decayed and became infested with weevils. The view he took was that nothing that contained less than 95 per cent. of liquorice should be allowed to be called liquorice. Arrowroot was adulterated with farina and potato starch, this adulteration being largely practised in England. Pepper was adulterated with ground rice, long pepper, olive stones, &c.

Mr. D. R. Harvest, of Thames-street, London, a gentleman who has been engaged in the spice and grocery trade for fifty years, expressed the opinion that the Food and Drugs Act had proved very beneficial in the case of ground pepper and ground ginger. The adulteration of these articles used to be largely carried on by wholesale firms, but the Act checked it, and he might say that it had received its death-blow from the vigorous application of the law in various parts of England. Not very long ago a consignment of white pepper was received from the Straits Settlement. Experts were led to believe that it was the pure article, but subsequently it was found to consist almost entirely of small clay pellets exactly resembling in shape and colour the genuine article. The fraud was said to have been practised on the importers by the Chinese before shipment. The greater part of the candied peel sold was pure, but some few makers had introduced a cheaper article, known to the initiated as candied skins—that was lemon and other kinds of peel from which the essences had been extracted. In his opinion the sale of baking powder mixed with alum should be treated as an offence against the Act.

Mr. C. Umney, of the firm of Wright, Layman, and Umney, wholesale chemists, Southwark-street, London, said that the Act of 1875 had done excellent service, and had raised the standard of purity, which at the present time was in a very good position. In his opinion the drugs in this country were not to be excelled in purity, and he attributed this largely to the working of the Act. He thought the provisions of the Act had been carried out with moderation on the part of local authorities and with very great efficiency on the part of public analysts. He admitted that very often public analysts had been called upon to undertake duties which they should not have been asked to do, and very often, owing to the absence of standards in books of reference, they had misled the public authorities. In this connexion he suggested that the standards of the British Pharmacopœia should be made statute law, and as such used by the public analysts.

The Committee then adjourned.

BOOKS ETC RECEIVED.

ALIGHIERI, DANTE, Roma.
Trattato di Patologia e Terapie Chirurgica Generale e Speciale. Von Professor Francesco Durante. Vol. I. Lire 5. 1895.

BAILLIÈRE ET FILS, Paris.
Traité de Médecine et Thérapeutique. Tome premier: Maladies Microbiennes. 1895. pp. 813.

BAILLIÈRE, TINDALL, & COX, King William-street, Strand, London.
The Deformities of the Human Foot, with their Treatment. By W. J. Walsham, M.B., C.M. Aberd., F.R.C.S Eng., and W. K. Hughes, M.B. Lond., L.R.C.P., M.R.C.S. 1895. pp. 550. Price 18s.

CHURCHILL, J. & A., New Burlington-street, London.
Surgical Pathology and Morbid Anatomy. By A. A. Bowlby, F.R.C.S. Third edition. 1895. Price 10s. 6d.

CLAY, C. J. & SONS, Ave Maria-lane, London, E.C.
Cambridge Natural Science Manuals: The Elements of Botany. By Francis Darwin, M.A., M.B., F.R.S. Illustrated. 1895. pp. 235. Price 6s.

CLAY, WM. F., Teviot-place, Edinburgh.
Diseases of the Spinal Cord. By Byrom Bramwell, M.D., F.R.C.P., F.R.S. Edin. Third edition. Illustrated. 1895. pp. 659. Price 16s. net.

FISCHER, G., Jena.
Handbuch der speciellen Therapie innerer Krankheiten, in sechs Bänden. Von Drs. F. Penzoldt und R. Stintzing. 15., 16., 17., 18., und 19. Lieferung. 1895.

GALE & POLDEN, Amen-corner, Paternoster-row, London, E.C.
The Theory of Physical Education in Elementary Schools. By T. Chesterton. With a preface by Colonel G. M. Onslow. 1895. Price 2s. 6d.

GRIFFIN, CHAS. & Co., Exeter-street, Strand, London.
Year-book of the Scientific and Learned Societies of Great Britain and Ireland. Compiled from official sources. Twelfth annual issue. 1895. Price 7s. 6d.
Essays in Heart and Lung Disease. By A. Foxwell, M.A., M.D. Cantab. 1895. Price 12s. 6d.

OLIVER & BOYD, Tweeddale-court, Edinburgh.
The Diseases and Deformities of the Fœtus: An Attempt towards a System of Ante-Natal Pathology. By J. W. Ballantyne, M.D., F.R.C.P., F.R.S. Edin. With plates. Vol. II. Congenital Diseases of the Subcutaneous Tissue and Skin. 1895. pp. 264. Price 10s. 6d.

PENTLAND, YOUNG J., Edinburgh and London.
Medical Gynæcology: a Treatise on the Diseases of Women from the Standpoint of the Physician. By A. J. C. Skene, M.D. Illustrated. 1895. pp. 529.

RENSHAW, HENRY, Strand, London.
An Introduction to Pathology and Morbid Anatomy. By T. H. Green, M.D., F.R.C.P. Eighth edition. Revised by H. M. Murray, M.D., F.R.C.P. Illustrated. 1895. pp. 579.

ROTHSCHILD, J., Rue des Saints-Pères, Paris.
La Méthode Brown-Séquard: Traité d'Histothérapie. La Thérapeutique des Tissus. Par le Dr. M. Bra. 1895.

SHAW & SONS, Fetter-lane, London, E.C.
Archbold's Lunacy. By S. G. Lushington, M.A., B.C.L., Barrister-at-Law. Fourth edition. 1895. Price 2 guineas.

SMITH, ELDER, & Co., Waterloo-place, London.
St. Bartholomew's Hospital Reports. Edited by S. West, M.D., and W. J. Walsham, F.R.C.S. Vol. XXX. 1894.
Indurative Mediastino-Pericarditis. By Thomas Harris, M.D. Lond., F.R.C.P. Reprint. 1895. pp. 67. Price 5s.

SWEET AND MAXWELL, 3, Chancery-lane, London.
The Law of Copyright in Designs, together with the Practice relating to Proceedings in the Courts and in the Patent Office, and a full Appendix. By L. Edmunds, D.Sc., LL.B., and others. 1895. pp. 291.

THE DENTAL MANUFACTURING COMPANY, Lexington-street, London.
Dental Microscopy. By A. H. Smith, L.R.C.P. Lond., M.R.C.S., L.D.S. Eng. Illustrated. 1895. Price 6s. net.

THE LEADENHALL PRESS, London.
Comfort in the Home. By M. J. Loftie. 1895. Price 1s.

VOSS, LEOPOLD, Hamburg und Leipzig.
Klinische Vorlesungen über Syphilis. Von Dr. E. Düring. 1895. pp. 320.

The Brewing of Non-excisable Beers; by J. Pocock; illustrated (Nixon and Jarvis, Bank-place, Bangor, 1895); price 2s. 6d.—Royal University of Ireland Examination Papers, 1894: a Supplement to the University Calendar for the year 1895 (printed for the University by Ponsonby and Weldrick, Dublin).—Medical Missions in India: a Quarterly Journal; April, 1895; No. 1 (printed at the Mission Press, Ajmere).—Zeitschrift für Sociale Medicin; von Dr. A. Oldendorff, Berlin; Erster Band, Heft 1 (G. Thieme, Leipzig. 1895).—The Royal Natural History; Vol. IV.; Part 19 (Fred. Warne & Co., Bedford-street, Strand, London).—Le Monument d'Alfred Durand-Claye; inauguration le 27 avril, 1894 (F. Levé, rue Cassette, Paris).—Illustrated Modern Art and Literature; Vol. I., No. 7 (printed at 68, Fleet-street, London); price 1s.—A Comparative Study of the Treatment of Diphtheria, especially in regard to Antitoxin, being a Chapter in advance of "Diphtheria and its Associates; by Lennox Browne, F.R.C.S. Edin., (reprint from the "Journal of Laryngology"; Vol. IX.; May, 1895.)—The Contract System and the Food-supply in Poor-law Unions: a Letter addressed to Boards of Guardians by a District Medical Officer (W. Matthews, Printer, Guildford).—De la Symphyséotomie à la Clinique Baudelocque pendant l'année 1894; par A. Pinard (G. Steinheil, Paris; 1895).—Fonctionnement de la Maison d'Accouchements, Baudelocque Clinique de la Faculté; par le Professeur Adolphe

Pinard; année 1894 (G. Steinheil, Paris, 1895).—Przeglad Chirurgiczny, tome ii., zeszyt 3 (K. Kowalewskiego, Mazowiecka S., Warszawa, 1896).

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

AGNEW, T. H., L.R.C.S. & P. Edin., has been appointed House Physician to the Royal Infirmary, Liverpool.

ARMSTRONG, HUBERT, M.B., Ch.B. Vict., has been appointed House Surgeon to the Royal Infirmary, Liverpool.

BICKERTON, R. E., M.B., Ch.B. Vict., has been appointed House Physician and Ophthalmic Assistant to the Royal Infirmary, Liverpool.

BINNEY, E. H., M.B. & Ch.M. (Sydney), has been appointed Senior Resident Medical Officer to the Sydney Hospital, N.S.W.

BRICKWELL, H. T., M.R.C.S., L.S.A., has been appointed Medical Officer for the Chigwell Sanitary District of the Epping Union, vice Jameson, resigned.

BRADFORD, R. D., L.R.C.P., L.R.C.S., L.M. Edin., has been appointed Medical Officer for the Adbro' Sanitary District of the Skirlaugh Union, vice Readman, resigned.

BROWN, F. S., M.R.C.S., L.S.A., has been appointed Medical Officer and Public Vaccinator for the Caunton and Elston Sanitary Districts of the Southwell Union.

BUCHANAN, G. S., B.Sc. Lond., M.D. (State Med.), has been appointed Medical Inspector to the Local Government Board.

COLLINS, A. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., L.M., has been appointed Medical Officer for the Riseley Sanitary District of the Bedford Union, vice Banks, resigned.

DOBIE, WM., M.D. ST. AND., L.R.C.P., L.R.C.S. Edin, has been appointed Honorary Medical Officer of the Keighley Mission to the Deaf and Dumb.

DREAPER, J. B., L.R.C.P., L.M. Edin., M.R.C.S., has been appointed Medical Officer of Health for the Ashbourne Rural Sanitary District.

ELKINS, F. A., M.D. Edin., C.M., has been appointed Medical Superintendent of the Sunderland Borough Asylum for Lunatics at Ryhope.

FINNIE, J. E., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Lock Hospital, Liverpool.

GREER, THOS., M.D., M.Ch. Irel., has been appointed Medical Officer for the Second Sanitary District of the Cambridge Union, vice Rygate, resigned.

GRIFFITHS, G. B., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Surgeon in H.M.'s Prison Service.

HARTLEY, A. C., M.D., C.M., F.R.C.S. Edin., has been appointed Medical Officer for the Bedford and Kempston Sanitary District of the Bedford Union, vice Adams.

JESSOP, J. W., L.R.C.P. Lond., M.R.C.S., has been appointed Surgeon-Lieutenant to the G. (Horncastle) Company of Rifle Volunteers.

MORRISON, J., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Resident Medical Officer to the Queen Charlotte's Lying-in Hospital.

ODELL, ROBT., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Third Sanitary District of the Hertford Union, vice Wylie, resigned.

ROSS, S. J., M.B., Ch.B. Vict., has been appointed House Surgeon to the Royal Infirmary, Liverpool.

RUNDLE, F. C., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Southwick Sanitary District of the Fareham Union, vice Matthews, resigned.

SCATTERTY, W., M.B., C.M. Aberd., has been appointed Honorary Medical Officer of the Keighley Mission to the Deaf and Dumb.

SMALLWOOD, ED., L.S.A., has been appointed House Physician to the Royal Infirmary, Liverpool.

THORNE, A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Stock Exchange, London.

TOMORY, J. KAY, M.B., C.M. Edin., has been appointed Public Vaccinator for the Parish of Halkirk.

WHITEHEAD, A. MEREDITH, M.B., C.M. Aberd., M.R.C.S. Eng., has been appointed Honorary Surgeon to the Wellington Hospital, New Zealand.

WILKINSON, J. HOWARD, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed an Honorary Surgeon to the Dudley Dispensary.

WILSON, H. R., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Royal Infirmary, Liverpool.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ASYLUMS COMMITTEE OF THE LONDON COUNTY COUNCIL.—Pathologist to the London County Asylums. Salary £700 per annum, with travelling expenses. Applications to the Clerk of the Committee, Office, 21, Whitehall-place, S.W.

BOARD OF WORKS FOR THE HOLBORN DISTRICT (IN THE COUNTY OF LONDON).—Medical Officer of Health for the Holborn District. Salary £350 per annum. Applications to the Clerk to the Board, Holborn Town Hall, London, W.C.

BRIGHTON AND HOVE LYING-IN INSTITUTION AND HOSPITAL FOR WOMEN.—House Surgeon, unmarried. Salary £80 per annum, with furnished quarters, board, gas, coals, and attendance.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Board, residence, and allowance for washing provided. Applications to the Secretary, Office, 24, Finsbury-circus, E.C.

DURHAM COUNTY ASYLUM, Durham.—Pathologist and Junior Medical Officer. Salary £100 per annum, with board.

GLAMORGAN COUNTY ASYLUM, Bridgend.—Junior Assistant Medical Officer, unmarried. Salary £100 a year, with board (no beer or wine), lodging, washing, and attendance.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, London, W.—Senior Clinical Assistants.

HOSPITAL FOR SICK CHILDREN, Newcastle-upon-Tyne.—Resident Medical Officer. Salary £60, with board, lodging, and laundry.

LIVERPOOL STANLEY HOSPITAL.—Honorary Assistant Surgeon.—Junior House Surgeon. Salary £70, with board, &c.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (ALBANY MEMORIAL), Queen-square, Bloomsbury.—Senior and Junior House Physician respectively. Salary of the former £100 per annum, and of the latter £50 per annum, with board and apartments, in each case, in the Hospital.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—House Physician for six months. Salary at the rate of £80 per annum.

ROYAL EAR HOSPITAL, Frith-street, Soho-square, London, W.—House Surgeon (non-resident) for six months. Honorarium £12 10s.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, London.—Two Examiners in Dental Surgery.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge-road, London, S.E.—Clinical Assistant and Anæsthetist for six months. Salary at the rate of £30 per annum.

RURAL DISTRICT COUNCIL OF DROXFORD.—Medical Officer of Health for this rural district. Salary £125 per annum, to include travelling and all other expenses. Applications to the Clerk, Bishop's Waltham.

ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant for six months. Board and residence provided.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington, W.—Lecturer on Mental Diseases.

SOMERSET AND BATH LUNATIC ASYLUM, Wells, Somerset.—Second Assistant Medical Officer, unmarried. Salary £100 a year, with board, lodging, and washing.

TRINITY COLLEGE, Dublin.—Lecturer in Pathology.

UNIVERSITY COLLEGE, London.—Professorship of Materia Medica and Therapeutics.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician and House Surgeon for six months. Board and lodging provided.

Births, Marriages, and Deaths.

BIRTHS.

COOK.—On May 13th, at "Byfield," Bromley, Kent, the wife of P. Inkerman Cook, M.D., of a son.

COWELL.—On May 14th, at Tanza-road, Hampstead, the wife of A. R. Cowell, M.A., M.B. Cantab., of a daughter.

FOOT.—On May 19th, at Church House, Pulborough, Sussex, the wife of Ernest Foot, M.R.C.S., L.S.A., of a son.

GARDENER.—On May 18th, at Darley House, Venner-road, Sydenham, the wife of William F. Gardener, M.R.C.S., of a son.

GODDARD.—On May 18th, the wife of Bertram Goddard, L.R.C.P. Lond., M.R.C.S. Eng., of Pentonville-road, of a son.

HAY.—On May 20th, at Lichfield, Stafford, the wife of Deputy-Inspector-General Robert Hay, R.N., of a son.

KENYON.—On May 15th, at Oakhurst, London-road, St. Leonards-on-Sea, the wife of G. Herbert Kenyon, M.D., late of Hooton Pagnell, of a daughter.

KINGSTON.—On May 20th, at Alsager, Stoke-on-Trent, the wife of Henry F. Kingston, B.A., M.B., B.Ch. Dub., of a daughter.

MACLEAN.—On May 20th, at Penrose Lodge, Tooting, the wife of J. N. Maclean, M.B., of a son.

POWELL.—On May 16th, at Ashwick Court, Oakhill, Bath, the wife of Lewis Powell, M.R.C.S., of a daughter.

TAYLOR.—On May 19th, at Kennington-park-road, S.E., the wife of Herbert Taylor, M.B., of a son.

WEBSTER.—On May 19th, at Duppas-hill, Croydon, the wife of George L. Webster, M.R.C.S. Eng., of a daughter.

MARRIAGE.

BLAIKIE—LEICKSTER.—On May 21st, at St. Thomas's English Episcopal Church, Edinburgh, Robert Henry Blaikie, M.A., M.D., F.R.C.S. Edin., fourth son of the Rev. Professor W. Garden Blaikie, D.D., LL.D., New College, Edinburgh, to Edith, second daughter of the Rev. M. A. Leicester, M.A. Cantab., Dalhousie-terrace, Edinburgh.

DEATHS.

BOSTOCK.—On May 18th, at Onslow-gardens, Deputy-Surgeon-General John Ashton Bostock, C.B., Hon. Surgeon to the Queen, late Scots Guards, in his 80th year.

CLEGHORN.—On May 16th, at Stravithie, Fifeshire, Hugh Francis Clarke Cleghorn, M.D., LL.D., in his 75th year.

CRAIGIE.—At Musselburgh, on the 16th inst., James Stedman Craigie, M.D. Edin., B.Sc. Pub. Health Edin., aged 40.

MARSTON.—On May 16th, drowned at sea off Shoeburyness from the sinking of a yacht during a squall, Lieutenant Frederick Muir Marston, Royal Artillery, son of Surgeon-General and Mrs. Jeffery A. Marston.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 23rd, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
May 17	29·72	N.	45	39	64	49	41	...	Cloudy
,, 18	29·67	N.E.	49	46	89	55	43	0·14	Cloudy
,, 19	29·63	N.E.	50	48	70	52	47	...	Cloudy
,, 20	29·74	N.E.	48	45	67	54	45	...	Cloudy
,, 21	29·71	E.	54	49	101	61	47	...	Hazy
,, 22	29·84	S.W.	50	49	111	70	45	...	Hazy
,, 23	29·92	S.E.	60	55	110	69	50	...	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY.—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—Dr. St. Clair Thomson and Dr. R. T. Hewlett: Micro-organisms in the Healthy Nose.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 1 P.M., Mr. W. Lang: Conjunctival Affections.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. G. Stoker: Chronic Glandular Diseases of the Naso-pharynx.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Percy Smith: Developmental Insanity, Circular Insanity.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Beevor.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 8 P.M., Mr. A. S. Morton: Optic Neuritis.—Hospital for Skin Diseases, Blackfriars, 1 P.M., Dr. Payne: Pemphigus and its Allies.

THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Mr. B. Pitts: Abdominal Surgery in Children.—National Hospital for the Paralysed, Bloomsbury, 2 P.M., Dr. Bastian: Cases in the Wards.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. Jonathan Hutchinson: Cases in the Wards.

FRIDAY.—LONDON POST-GRADUATE COURSE.—Bacteriological Laboratory, King's College, 3 to 5 P.M., Prof. Crookshank: Tuberculosis and Leprosy.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Hyslop: Puerperal and Lactational Insanity.

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

A LITHOGRAPHED CIRCULAR LETTER, emanating from an office in the Strand district, is being sent to members of the medical profession, offering to supply them with THE LANCET, in conjunction with an accident insurance policy. The Proprietors of THE LANCET are in no way connected with the scheme (of which they cannot approve), and were not aware of its inception until their attention was called to it by a reader who had received the circular in question.

THE CARE OF YOUNG IMBECILES.

A CORRESPONDENT sends us the following, and would be glad to know where and to whom to apply in order to assist the subjoined case, on which we comment in another column:—

"There is in the village here a labouring man who is unfortunately the father of a girl aged five years, who from her birth has been, and continues to be, an idiot of the lowest type—cannot walk nor talk, is incurable, and has not even sufficient intelligence to restrain the calls of nature. The parents are hardworking, honest people. They have several other children and a very old woman living with and dependent on them. The mother of the child has hitherto done her utmost for the idiot; but now, being in rather delicate health, she finds the strain almost more than she can bear. The painful sight is also distressing and most injurious to the other children. I am unable to discover an asylum or institution where the case can be admitted."

Mr. H. S. E. Hewer (St. Bartholomew's Hospital).—The name was not received in the official list.

A PROTEST.

To the Editors of THE LANCET.

SIRS,—On looking over the column of vacancies in THE LANCET of May 11th I saw an advertisement for an assistant surgeon as locum tenens for three months at the Rainhill County Lunatic Asylum, near Liverpool, and the inducement held out is £2 2*s.*, with board and lodging, per month. I had the honour of serving as alderman from the formation of the county council in 1888 till 1892, and only wish that I had remained a member of that body so as to have meted out punishment to the party who dared to offer 10*s.* 6*d.* per week to a registered member of what is supposed to be a learned profession.

I am, Sirs, yours faithfully,

A LATE ALDERMAN OF THE LANCASHIRE COUNTY COUNCIL.

May 13th, 1895.

TROOPS FOR INDIA *vid* THE CAPE.

A CORRESPONDENT writes from Croydon advocating very strongly the Cape route, and urges the expediency of the establishment of a midway sanatorium there, and the disembarkation and re-embarkation of troops at the Cape of Good Hope. While we fully allow many of the advantages that can be urged in favour of the Cape climate and the importance of maintaining that route to India, we do not think that there is much prospect, on account of financial and other considerations, of our correspondent's views being entertained by the Governments of India and this country. The troopship service *vid* the Suez Canal has been arranged, as far as practicable, so as to avoid invalids from India arriving at the commencement of winter in this climate. As a rule, soldiers—especially sick soldiers—are very anxious to get home on leaving India, and do not like to be detained anywhere *en route*, even for hygienic reasons. One great thing which should never be lost sight of is the importance of quartering troops arriving from abroad in the most suitable and least exposed stations that can be found for them in this country during the following winter and spring.

Ajax.—We are of opinion that in such cases the duty of the neighbour summoned in an emergency to the patient of another medical man is to do what is necessary and hand the case over to the regular medical attendant.

"A CASE FOR DIAGNOSIS."

To the Editors of THE LANCET.

SIRS,—I beg to thank Dr. Oscar Jennings and "M.B. Edin." for their courtesy in replying to my letter. The case under discussion occurred in the person of an inmate of my house, so that I feel sure that we may put on one side the possibility of cocaine poisoning; and as the patient has never been abroad or had an attack of ague this cannot have been the cause. There are two rather important facts I have omitted to mention—viz., (1) the patient at the time of the attack was adjusting the vaginal tube preparatory to a douche of a solution of boro-glyceride, using a soft red rubber tube perforated only at the sides; and (2) forty-eight hours after the commencement of the attack a cough occurred and became quite troublesome. No expectoration was seen, or came up, but after a cough the patient complained of a very putrid taste at times. The cough lasted about ten days. Looking at the symptoms, I am now inclined to think that a small embolism must have become impacted in a branch of the pulmonary artery, and possibly a thrombus formed in connexion with it, the result being also a pulmonary infarct. I shall be glad if any reader of THE LANCET will give me his opinion as to the correctness of my surmise.

I am, Sirs, yours truly,

May 19th, 1895. M.D. EDIN.

THE CASE OF MR. C. B. TOWNSHEND.

THE following additional subscriptions have been received or promised, and are hereby gratefully acknowledged:—

Dr. Jas. Chapman (Southampton)	£1	1	0	Mr. Arthur S. Wills (Stafford)	£0	10	0
Mr. Hammond Williams (Oswestry)	1	0	0	Mr. Arthur A. V. Wood (Corsham)	0	10	0
Dr. James Little (Dublin)	3	3	0	Dr. Clarke (Highampton)	0	5	0
Dr. H. R. Hadden (Dublin)	2	2	0	A Friend (Dublin)	0	7	6
Mr. Wright Wilson (Birmingham)	1	1	0	Mr. N. V. Wise (Trowbridge)	0	10	0
Mr. C. W. J. Brasher (Bristol)	0	10	0	Mr. Jas F. Churchill (Chesham)	1	1	0

Further subscriptions are earnestly requested, and will be received and acknowledged by the Rev. H. Townshend, 41, King Henry's-road, South Hampstead, N.W.

PRACTICE IN BRITISH SOUTH AFRICA.

To the Editors of THE LANCET.

SIRS,—Can any of your readers give me any information concerning medical practice in South Africa? And also if the field there be already fully supplied.

I am, Sirs, yours truly,

May 18th, 1895. M.B.

MEDICAL ADVERTISING AT HARROGATE.

THE *Harrogate Advertiser* of May 25th contains the advertisement of Dr. Roberts's book, price 6*d.*, with quotations from our own review. This is an undesirable way of announcing his "discussion on the therapeutics of the Harrogate waters." Another practitioner in the same paper has the following paragraph, which, we are informed, has appeared repeatedly:—

> "Dr. —— requests us decisively to contradict the rumour which has reached him from several sources that, having taken a partner, he contemplates retiring from practice in Harrogate. Dr. —— disclaims any such intention."

Mr. L. King.—We do not prescribe or recommend individual practitioners.

THE PATIENT'S LEISURE AND THE DOCTOR'S HASTE.

THE *Leicester Post* gives an account of a baby fed on biscuits and finally on bread-sop. Very naturally the baby died. When the child was dying a medical man, Mr. Dodd, was sent for in a hurry. A second message had to be sent before he arrived, to find the child in coma with convulsions. The foreman of the jury before which the case was investigated thought the medical man should have attended sooner. Mr. Dodd very reasonably remarked that a practitioner's time was not his own. Other cases claimed yet earlier attention. He thought in such cases parents should call the nearest medical man first and their own afterwards. The real moral of this case is that parents should have far more medical advice, and should seek it much sooner than they do. It is of no use to wait till death is imminent and then to blame the practitioner because he does his work in order. This child's life might have been saved if the mother had taken the advice of a medical man with regard to the elementary points in feeding a baby. The foreman of the jury should have given his censure a different direction.

Trachea.—Will this correspondent kindly send us his address, which has been mislaid?

A HINT TO THE GENERAL MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—It would seem an opportune time to suggest through the medium of THE LANCET to the General Medical Council the glaring anomaly that though quacks are being extirminated, yet the vendors of patent remedies flourish broadcast throughout our land. Can the General Medical Council not interfere? Patent remedies are regarded by the medical profession as the productions of quacks. Why, then, cannot their sale be prohibited by law?

To me even a stranger anomaly exists. When medical classes are being announced in the local papers as about to begin the names of the professors or lecturers on their respective specialties are advertised side by side with the vaunted medicine mongers, advertising dentists, curers of piles, &c. Honourable and leading professional men must blush to read such advertisements of their calling in the daily papers, yet they wink at it, and abide by it.

I am, Sirs, yours faithfully,

May 19th, 1895. MEDICUS.

THE LIBELLING OF A PROFESSION.

Reynolds' Newspaper declines to withdraw its suggestion that the medical profession arranges with friends without the patients' consent for the death of said patients with incurable disease—a suggestion couched in the most libellous terms, and itself a libel on a profession which prolongs such lives to the utmost limit. So much the worse for *Reynolds' Newspaper*. It will suffer more than the profession.

"SELF-PROPELLING" CHAIRS.

A CORRESPONDENT writes:—

> "Can any of your readers advise as to a self-propelling chair for a patient suffering from paraplegia? He has good strength in the back and arms, but has lost a foot. One such as he might use out-of-doors as well as indoors is desirable. He already has a 'Merlin,' but the driving arrangement in this hurts his hands and tears his coat sleeves and gloves."

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Glasgow Herald, Lincolnshire Echo, Brighton Gazette, Hobart Mercury, Newcastle Chronicle, Leicester Post, Oldham Standard, North Cheshire Herald, Kent County Examiner, Birmingham Gazette, Derbyshire Times, Manchester Courier, Bradford Observer, Liverpool Echo, Citizen, Builder, Cork Constitution, Derby Reporter, Leeds Mercury, Scotsman, Architect, Redcar and Saltburn-by-the-Sea Gazette, Bristol Mercury, Alnwick Gazette, Times of India, Pioneer Mail, Morning, Yorkshire Post, Worthing Intelligencer, Liverpool Daily Post, Boston Independent, Sanitary Record, West Middlesex Standard, City Press, Weekly Free Press and Aberdeen Herald, Surrey Advertiser, Star, Reading Mercury, Lincoln Gazette, Stroud News, Hertfordshire Mercury, Reynolds' Newspaper, Mining Journal, Buchan Observer, Chester Courant, Darlington Echo, Crewe Guardian, St. Bartholomew's Hospital Journal, Manchester Guardian, Worcester Daily Times, Manchester Evening News, Southampton Observer, Lincolnshire Chronicle, Rochdale Observer, Grays Standard, Blackpool Gazette, Craven Herald, Cape Times, Buxton Herald, Gravesend Standard, Westmeath Examiner, Rangoon Gazette, North China Daily News, Ayr Observer, Durham Mercury, Berwick Journal, Auckland Chronicle, Ulverston Advertiser, Montreal Daily Star, Melbourne Argus, Madras Times, Southport Visitor, Nurses' Journal, &c. &c.*

Communications, Letters &c. have been received from—

A.—Army Medical Department, Lond., Director-General of; Aria Patent Lamp Dépôt, Lond.

B.—Mr. H. J. Buck, Lond.; Mr. J. S. Buck, Eaton Socon; Mr. C. Birchall, Liverpool; Mr. D. M. Beddoe, Lond.; Mr. E. N. Binney, Lond.; Mr. F. E. Budge, Truro; Mons. O. Berthier, Paris; Messrs. A. and C. Black, Lond.; Messrs. J. Bates and Sons, Lond.; Messrs. Blondeau et Cie., Lond.; Messrs. Bryce and Rumpff, Lond.; Messrs. R. and J. Beck, Lond.; Brighton and Hove Lying-in Institution, Sec. of; Bona fide, Lond.; Ben, Lond.

C.—Dr. H. Campbell, Lond.; Dr. W. R. H. Coombs, Bedford; Dr. P. J. Cook, Bromley; Mr. E. Cureton, Shrewsbury; Mr. Mayo Collier, Lond.; Mr. J. Carter, Lond.; Mr. W. F. Clay, Edinburgh; Mr. C. R. Cross, Lond.; Mr. C. D. Christmas, Bedford; Messrs. Crossley, Moir, and Co., Lond.; Cortland Wagon Co., Lond.; Cœlo, Lond.

D.—Dr. D. S. Deaderick, Mammoth Spring, Argansas; Mr. H. Davenport, Lond.; Mr. S. Dougall, Cannes; Droxford Union Rural District Council, Clerk of; Dorset County Asylum, Dorchester, Med. Supt. of; Durham County Asylum, Clerk of.

E.—Dr. F. W. Eurich, Wiesbaden; Mr. W. O. Evans, Buckley; Messrs. Eason and Son, Dublin.

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I.—Inst. of Anatomy, Bucharest.

K.—Mr. B. Kühn, Lond.

L.—Dr. J. F. Little, Lond.; Mr. W. E. Langton, Lond.; Liverpool Stanley Hospital, Sec. of; Lace Web Spring Mattress Co., Sandiacre.

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S.—Dr. S. Sunderland, Lond.; Mr. P. Swain, Plymouth; Mr. A. Stenhouse, Glasgow; Mr. C. H. Sers, Lond.; Mr. D. F. Shearer, Lond.; Mrs. Stubbs, London; Herr P. Spindler, Leipsig; Messrs. S. Smith and Co., Lond.; Messrs. G. Street and Co., Lond.; Messrs. J. S. Stubbs, Lond.; Sanitary Wood Wool Co., Lond.; Scalpel, Lond.; Spero, Lond.

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V.—Mr. J. W. Vickers, Lond.

W.—Mr. H. J. Wilson, Lond.; Mr. R. W. Winstanley, Haslemere.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. R. H. Adam, Bolton; Dr. G. A. Abrath, Sunderland; Mr. R. Ackrill, Harrogate; Mr. R. R. Anderson, Carmarthen; Mr. H. G. Anderson, Burton-on-Trent; Mr. J. E. C. Allott, Croscombe.

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D.—Messrs. Dawson and Sons, Lond.; Doctor, Lond.; Dick, Lond.

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H.—Dr. J. Henderson, Gloucester; Mr. W. A. Hardiker, Brymbo; Mr. F. Howse, Denaby Main; Hoxton House Asylum, Supt. of; House Surgeon, North Ormsby.

I.—Investor, Lond.

J.—Dr. W. L. Jones, Hinckley; Dr. F. F. Jay, Tenterden; Johnston, Woodford Green; J. H., Lond.

K.—Dr. H. F. Kingston, Stoke-on-Trent.

L.—Leeds Gen. Infirmary, Sec. of.

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P.—Dr. E. J. Parry, Pontycymmer; Mr. J. E. H. Phillips, Southsea; Mrs. Peachey, Hope; Prestwich County Asylum, Clerk of; Patella Lond.

R.—Mr. H. A. Roeschling, Leicester; Rye Lane, No. 204, Peckham; R., Lond.

S.—Mr. J. D. Spence, Lond.; Mr. A. Stenhouse, Glasgow; Mrs. Stubbs, Lond.; Stafford Gen. Infirmary, Sec. of; Sanitas Co., Lond., Sec. of; Smedley's Hydro. Establishment, Matlock, Manager of; Surgeon, Boscombe; Spes, Lond.; Syntax, Lond.; Statim, Lond.; Surgeon, Burgess Hill, S. G. H., Lond.

T.—Mr. T. F. Tracey, Glasgow; Mr. Thrower, Lond.; Mr. J. Thin, Edinburgh; Tamar Indien Grillon, Lond.; T. H. W., Oswestry; Theta, Lond.

U.—Union Assurance Soc., Lond.

V.—Victoria Hospital for Children, Chelsea, Sec. of; Vendor, Lond.

W.—Mr. A. B. Wheeler, Manchester; Mr. R. J. Williams, Saltney; Mr. J. L. W. Ward, Merthyr Tydfil; Messrs. Wright, Layman and Umney, Lond.

X.—X., Lond.; X. Y., Lond.

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Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials &c. sent to the Office in reply to advertisements; copies only should be forwarded.

Terms for Serial Insertions may be obtained of the Manager, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Travers'ère, Asnières, Paris.